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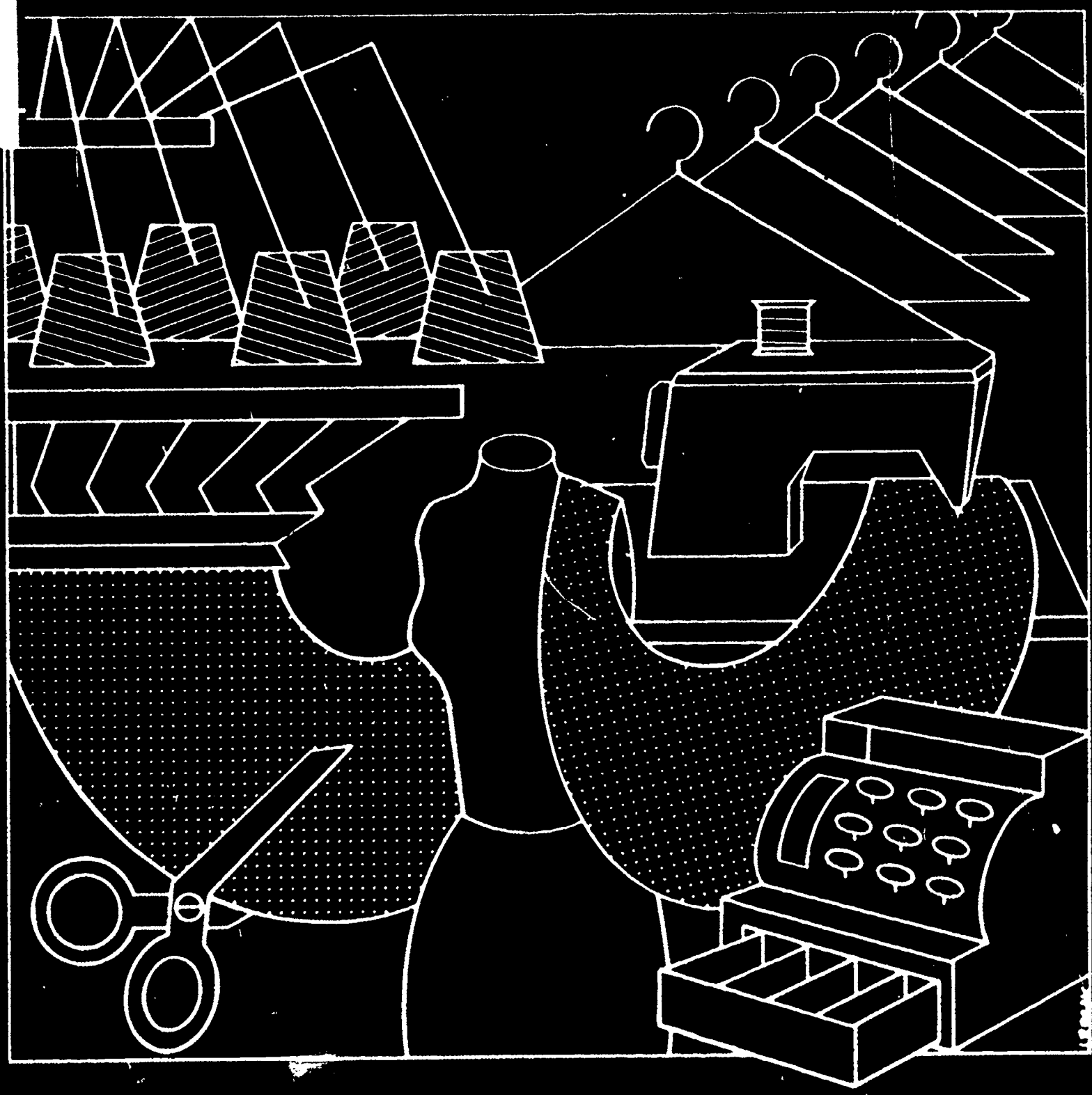
ABSTRACT

The drycleaning and laundering guide is the last of a series of five interrelated program resource guides encompassing the various dimensions of the fashion industry. The job-preparatory guide is intended to provide youth and adults with intensive preparation for initial entry employment and also with career advancement opportunities within specific categories of jobs within the clothing maintenance industry. It provides an overview of the industry, occupational opportunities, and competencies required of workers. It contains outlines of areas of instruction that include objectives to be achieved, teaching content and suggestions for learning experiences, evaluation, teaching resources, and instructional supplies. Areas of instruction range from fundamental instruction in textiles and apparel construction analysis to the skills of spotting, finishing, laundering, and salesmanship. Career advancement instruction includes leathers and suede, plant maintenance, industry workshop, and plant management. Suggested equipment and approximate costs are included as well as a bibliography and a list of representative trade associations. Other program considerations and services judged to be important to this job-preparatory program are also presented. (Author/MW)

FASHION INDUSTRY SERIES NO 5

Drycleaning and Laundering

a suggested program guide



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FOREWORD

The Drycleaning and Laundering guide is one of a series of interrelated program resource guides encompassing the various dimensions of the Fashion Industry. The purpose of the series is to provide school administrators and teachers with a source of information which can be used to establish, expand, or evaluate instructional programs related to the broad field of fashion.

The Fashion Industry Program Series includes five separate guides. *Career Exploration in the Fashion Industry* — Series No. 1 presents an introduction to the different segments of the fashion field and suggestions for a career exploration program. *Apparel Design and Production* — Series No. 2, *Textile Design* — Series No. 3, *Fashion Merchandising* — Series No. 4, and *Dry Cleaning and Laundering* — Series No. 5 are suggested job-preparatory (skill development) program guides. These job-preparatory guides are conceived to provide youth and adults with intensive preparation for initial entry employment and career advancement opportunities within specific categories of jobs in the fashion industry.

In developing the job-preparatory guides, consideration was given to the structuring of objectives, content and learning experiences in terms of the varying competencies considered essential for different levels of employment responsibility, thereby facilitating the adoption of performance-based instruction within a variety of institutional settings. The outcomes of such instruction are identified with immediate employment or continuing education, including higher education.

The *Drycleaning and Laundering* guide provides an overview of the drycleaning and laundering industry, occupational opportunities, and competencies required of workers. It contains outlines of areas of instruction that include objectives to be achieved, teaching content and suggestions for learning experiences, evaluation, teaching resources, and instructional supplies. Suggested equipment and approximate costs are included as well as a bibliography and a list of representative trade associations. Other program considerations and services judged to be important to this job-preparatory program are also presented.

All of the guides were prepared by faculty specialists of the Fashion Institute of Technology pursuant to a grant from the U.S. Office of Education to the Institute. This guide was developed and prepared by Joseph Samuels, Assistant Professor of Textiles. Hilde Jaffe, Associate Professor of Fashion Design, developed the area of instruction in Apparel Construction Analysis.

The development of the guides was under the direction of William Berndt, Project Officer, and Mary Lee Hurt and Edwin L. Nelson, Education Program Specialists in the U.S. Office of Education.

Many useful suggestions were received from industry and educational consultants, and from administrators and teachers of existing programs. Although all suggestions could not be incorporated, each was carefully considered in terms of the publication's intended use. In view of this, it should not be inferred that the program suggestions are completely endorsed by any one institution, agency or person.

The program suggestions contained in this guide should be viewed as resource information which can be modified and adapted by administrators and teachers to meet local, State and regional needs.

Jeannette Jarnow
Edwin Goodman Professor, Fashion Institute of Technology,
Project Director, Program Guides for the Fashion Industry.

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Grateful acknowledgement is due many teachers, administrators and people in the Drycleaning and Laundering field for their aid, counsel and cooperation in the preparation of this publication.

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Alan Liederman, President, Avis Machinery Co., Kenilworth, New Jersey.

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THE IMPORTANCE OF THE FASHION INDUSTRY

Fashion is as old as recorded history and as new as tomorrow. It manifests itself not only in what people wear but in what they eat, the way they talk, what they do, how they live and the things they use.

THE IMPACT OF FASHION

Fashion can be defined as all of the prevailing styles followed by substantial groups of people at a given time in a given place. Fashion touches many facets of human living and, in turn, the changing conditions of the environment in which that living takes place bring about changes in fashion. The intensity with which changes in fashion are followed by people everywhere on all levels of society is evidence of its impact on human activities and its significance as a social phenomenon.

The phenomenon of fashion has been studied, analyzed, and explained in many different terms. Economists view it as an element of artificial obsolescence that impels people to replace commodities which still retain their original usefulness even though the new may not greatly differ from the old. To sociologists it represents a manifestation of social interraction and an element of status seeking; psychologists find indications of sex impulses in patterns of dress. Historians see fashions as a reflection and documentation of the ideals, tastes, and values of their times just as are paintings, sculpture and other art forms.

The influence of fashion is felt not only throughout the social world but in all categories of economic activities. It is most clearly demonstrated however in a multi-billion dollar industry complex, commonly known as the "Fashion Industry", which is dedicated to the design, production, and distribution of apparel and accessories for men, women and children. Because clothing is considered to be the oldest and purest form of fashion expression, this industry embodies more aspects of fashion than any other single rallying point.

Fifty years ago "fashion" was directed, ordained, cultivated and handled by the few, in small shop operations. Today the fashion industry is, on the one hand, the exclusive air of an elegant specialty store presenting a collection of high-priced originals, and on the other hand, it is the giant factories that dispatch "blue jeans" in endless dozens to cities and prairie towns across America.

A business that began as an enterprise of small shops now caters to and employs millions of people, offers a multitudinous array of products, utilizes a diversity of talents and ranks among the largest industries in our economy.

SCOPE OF THE FASHION INDUSTRY

The fashion industry is not a clearly defined entity. It is a complex of many different industries, not all of which appear to have anything of fashion among their products.

Plainly recognizable as part of the fashion business are those industries devoted to the making of apparel and accessories for men, women and children. When one moves back to an earlier stage of production, to the fabrics, leathers, and plastics from which the finished products are made, the line between what is and what is not the fashion business becomes even harder to draw. Some textile mills that produce apparel fabrics also produce bed sheets, carpets, or industrial fabrics. Some chemical companies that produce fibers which eventually are spun, woven and cut to make garments are producers also of explosives, fertilizers, and photographic film. Some producers and processors in fields normally remote from fashion find themselves temporarily with one foot in the fashion business when prevailing styles demand such items as industrial zippers, chain belts, paper dresses, or whatever the case may be. A season or two later, they may be as far removed from it as ever, but for the time being, they too are part of the business of fashion.

The fashion business includes the stores that sell and service apparel and accessories, and the mail-order catalogues from which many consumer purchases are made. It includes businesses that neither produce nor sell merchandise, but render advice, assistance or information to those that do. In this last category are consumer publications that disseminate news of fashion, ranging from the women's page of the daily newspaper to magazines devoted primarily to fashion news such as *Vogue, Harper's Bazaar* or *Gentlemen's Quarterly*. Also

included in this category are trade periodicals which carry news of fashion and information on production and distribution techniques to retailers, apparel manufacturers, and textile mills. It includes also publicists and advertising specialists, fashion consultants, and buying offices that represent retail stores in the vast wholesale centers.

All these and more are part of the business — farms and mills and factories, union labor and white-collar workers, business tycoons and creative artists. All play their parts in the business of fashion.

ECONOMIC IMPORTANCE*

The economic activities involved in the design, production, merchandising and maintenance of textiles, apparel and accessories are a sizeable force in our nation. Whatever yardstick one uses as a measurement, their importance becomes clear.

In terms of money that Americans spent in 1972, clothing, accessories, shoes, and clothing care services accounted for 62 billion dollars, an amount which constituted almost 10% of total consumer expenditures. In terms of factory output, the industry also ranks high. Textile output for 1972 reached 28 billion dollars and factory shipments of men's, women's and children's apparel exceeded 26 billion dollars.

Millions of people are employed in producing textiles and apparel, in staffing the retail stores that make this merchandise available to the consumer, and in the retail or industrial establishments that specialize in clothing services. Of the 20 million people employed in U.S. manufacturing industries in 1972, practically one in every eight was employed either in the industry divisions that produce apparel for men, women, and children or that produce the materials from which clothing is made. The apparel segment which alone employs almost 1.4 million people is the 6th largest employer of people in the manufacturing sector of the economy and, for example, employs more people than the entire printing and publishing field or the chemical and drug industry. Textile firms employ another million workers. In addition, retail outlets that play a significant part in the distribution of clothing employed the services of more than 1/4 of the 11.7 million men and women engaged in retail occupations in 1972 and of this number it is estimated that 50% are engaged in activities directly concerned with the merchandising of apparel and textile products. Drycleaning and laundering service establishments employed an additional 1/2 million.

The industry is also important to all parts of the country rather than just a small geographic area. Although the heaviest concentration of textile manufacturing facilities is in the South and New England, some phase of textile activity is carried on in nearly every state of the Union. Apparel production plants can also be found in every state and are increasingly being located in small towns where, in many cases, they are the only industry or the largest employer. Apparel and fabric retailers are to be found in every major city, in every suburb and in the smallest of towns.

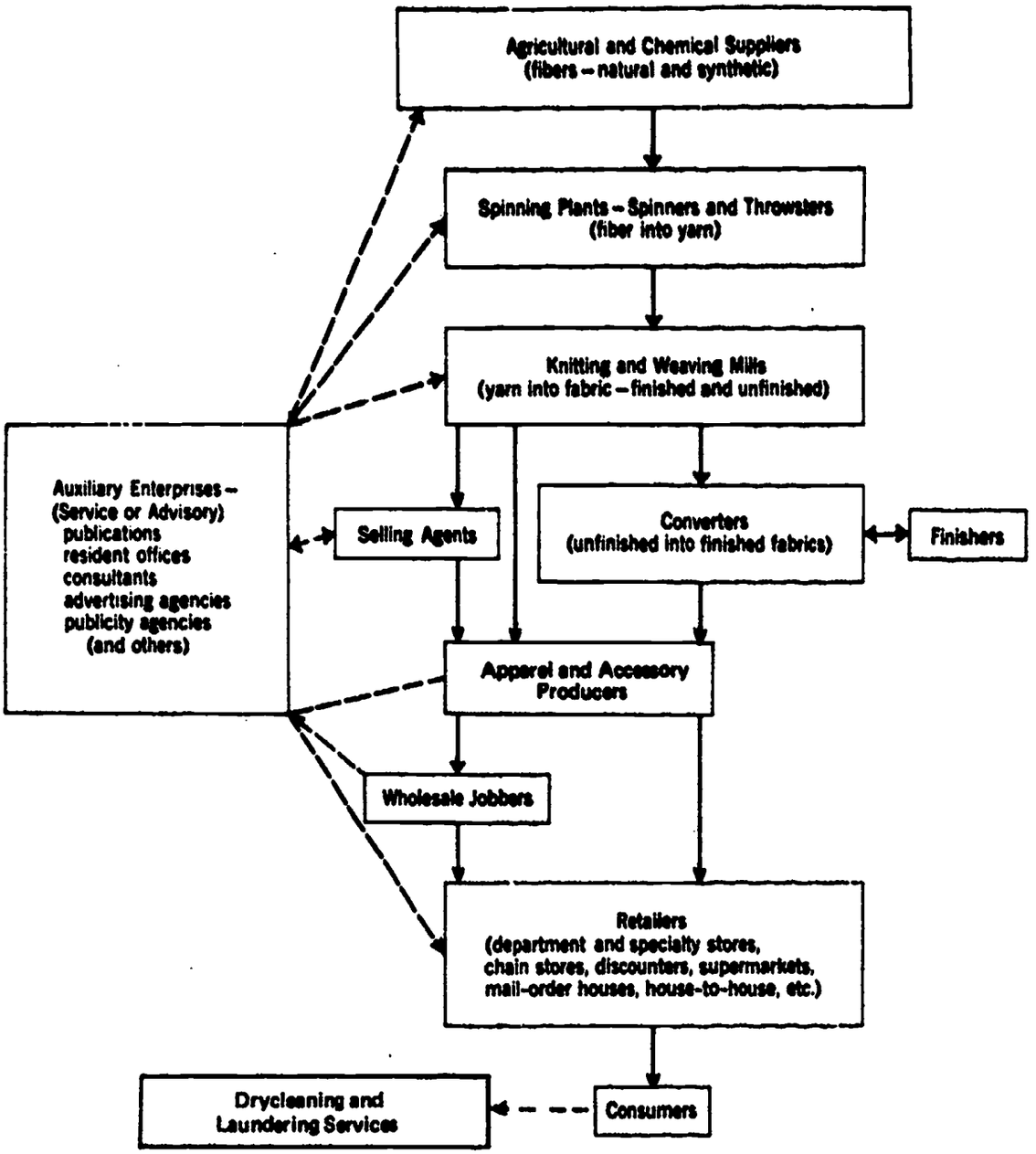
*Source of figures: *U.S. Industrial Outlook 1973,* U.S. Department of Commerce.

BROAD RANGE OF OCCUPATIONAL OPPORTUNITIES

Numbers alone, however, do not tell the full story of the importance of the fashion industry as a field of employment opportunity. The industry is many-faceted and offers a host of varied entry-jobs and career opportunities. It employs workers with every degree of skill and educational preparation. Training and/or experience in one segment is often an asset applied to another. Working conditions and financial compensation are satisfactory, and good pay is a by-product of good training, good job performance, good experience and good breaks. Pay ates vary from city to city, from company to company and from time to time.

There is a place in the industry for people of many different types and levels of skills which require diverse talents, interests and educational preparation. Technicians and artists, chemists and engineers, originators and copyists, cutters and sewers, buyers and sellers, administrators and entrepreneurs . . . . all these and more constitute the variety of occupational opportunities in the complex of industries involved in the design, production, distribution and servicing of textiles and apparel products.

FASHION INDUSTRY FLOW CHART



UTILIZATION OF THE GUIDE

School personnel using this guide will find that modifications can be easily made to fit the local conditions of their specific situation. The design of the overall suggested program is such that areas of instruction can and should be combined or eliminated entirely in adapting the program to meet local needs.

STRUCTURE OF THE PROGRAM

The components of the program suggested in this guide are based upon the differing performance requirements of different levels of employment responsibility. The program, therefore, reflects levels of competency to be achieved rather than levels of education, thereby facilitating its adaptation and use by secondary schools, post-secondary institutions and other types of training centers.

The basic skill development areas of instruction correspond to specific competencies needed for basic entry jobs and aim to prepare students for initial employment. The advanced areas of instruction progress in depth, scope and complexity of content and are designed to serve the needs of students who have more advanced career goals and/or greater educational or employment experience. The fundamental background areas of instruction, although not always essential for some basic skills, broaden the students' understanding of the occupational field and enhance their opportunities for job satisfaction and career progression. Where necessary for the development of specific skills, they are noted as prerequisites in the outlines of the areas of instruction.

The areas of instruction in the guide and the teaching modules in the instructional guidelines are flexible enough to allow for vertical and/or lateral occupational training plans. For example, enrollees in the program can:

1. *Either* progress laterally, component by related component, from simple to complex job skills in such a way that they can exit at varying points with a mastery of a specialized skill, if they choose not to complete the entire program.
2. *Or* enter the program at wherever they are occupationally and move vertically (or laterally) as far as they can or choose.

CONSIDERATIONS IN ADAPTATION AND MODIFICATION

The number of the different areas of instruction that are offered, the manner in which they are combined, the emphasis that is given to the different levels of areas of instruction and the comprehensiveness of the program will depend upon:

- The type of educational institution in which the program is being offered: for example, an adult training center would be less likely to offer the entire program than a post-secondary school.
- The time available for the program: for example, it would be more advisable in a one-year program, as contrasted to a two-year program, to eliminate complete areas of instruction rather than compromise the development of specific competencies desirable for meaningful employment.
- The occupational opportunities in the community: for example, it would be wiser to put more emphasis on the drycleaning program than the laundering program if employment opportunities in the laundry field are nonexistent or limited in the community.
- The job levels for which the program is designed: for example, little or no emphasis should be put on career-advancement areas of instruction if the objective of the program is to prepare students for basic-skill entry jobs.
- The nature of existing programs in the educational institution: for example, complete areas of instruction in clothing services could be substituted or added and offered as an option to students who are enrolled in currently existing clothing and textile programs.
- The students' special needs and occupational goals: for example, being responsive to students' individual needs in terms of where they are and what they wish to be.
- The opportunities that are available to the students for continuing study and articulation with advanced

job-preparatory programs: for example, a secondary school in a community which does not offer post-secondary job-preparatory programs should include career-advancement areas of instruction; a secondary school in a community in which post-secondary job-preparatory programs are already in existence might do better to concentrate on fundamental background and basic skill-development areas of instruction.

TIME ALLOTMENTS

The hours to be allotted to each area of instruction should also be modified and adapted to suit local situations. If available instructional hours are less than those suggested in this guide, it is suggested that certain teaching modules and/or complete areas of instruction be eliminated rather than weaken the development of skills needed for job entry.

THE DRYCLEANING AND LAUNDERING FIELD

The maintenance and care of apparel and textile products is the function of the drycleaning and laundering field. The enterprises and occupational activities in this field are many and varied.

The industry's establishments number over 100,000 and are located in every town and city of the country. The retail service establishments that constitute about 80% of the total number of plants in the industry, render such clothing services as dyeing, cleaning, laundering, pressing, storage, and garment repair. Other types of enterprises rent and service such company-owned products as linens, uniforms, career apparel, and diapers to both individual and business customers. Still others specialize in the franchising of coin-operated drycleaning and laundering establishments. The larger establishments which constitute about 20% of the total number of plants employ about one-half of the industry's workers.[1]

The last decade witnessed many changes and a growing diversification in the operations of the industry as a whole which offset the adverse impact upon its sales volume, caused by the increasing amount of "easy care" garments with their lower upkeep requirements and greater do-it-yourself upkeep capabilities. Mitigating industrial trends and technological changes are improving both the work environment and opportunities for entry jobs and career advancement in drv cleaning and laundry occupations. These developments, which show every evidence of continuance, are:

1. The increased utilization of rental linens by individuals and businesses paralleled by the growth of enterprises specializing in linen rental operations.
2. The increased number of self-owned and/or franchised coin-operated drycleaning and laundering establishments, and the relative ease of employment entry into such operations.
3. The increased employment opportunities within the textile industry as a result of the growing utilization of new drycleaning and/or organic solvent processes by textile dyeing, printing, and knitting plants.
4. The steadily increasing demand for career apparel by business concerns, such as airlines, banks, retailers, and the like, with its concomitant expansion of business opportunities for career apparel operations by laundering and drycleaning establishments.
5. An accelerated demand for drycleaning services resulting from the "steam-and-clean" method of cleaning which requires very little finishing.

MANPOWER NEEDS

According to the U.S. Department of Commerce,[2] laundry, drycleaning and garment repair receipts reached $6.3 billion in 1972 and are expected to inch upward through 1980. During this same period, the Bureau of Labor statistics estimates that employment will increase from 630,000 in 1971 to 730,000 by 1980.

The growth of large-scale drycleaning and laundering operations has further increased the demand for trained workers to fulfill these anticipated employment needs in clothing service occupations.

Employment in the Laundry, Drycleaning, and Valet Services Industry by Occupation, 1969 and Projected 1980

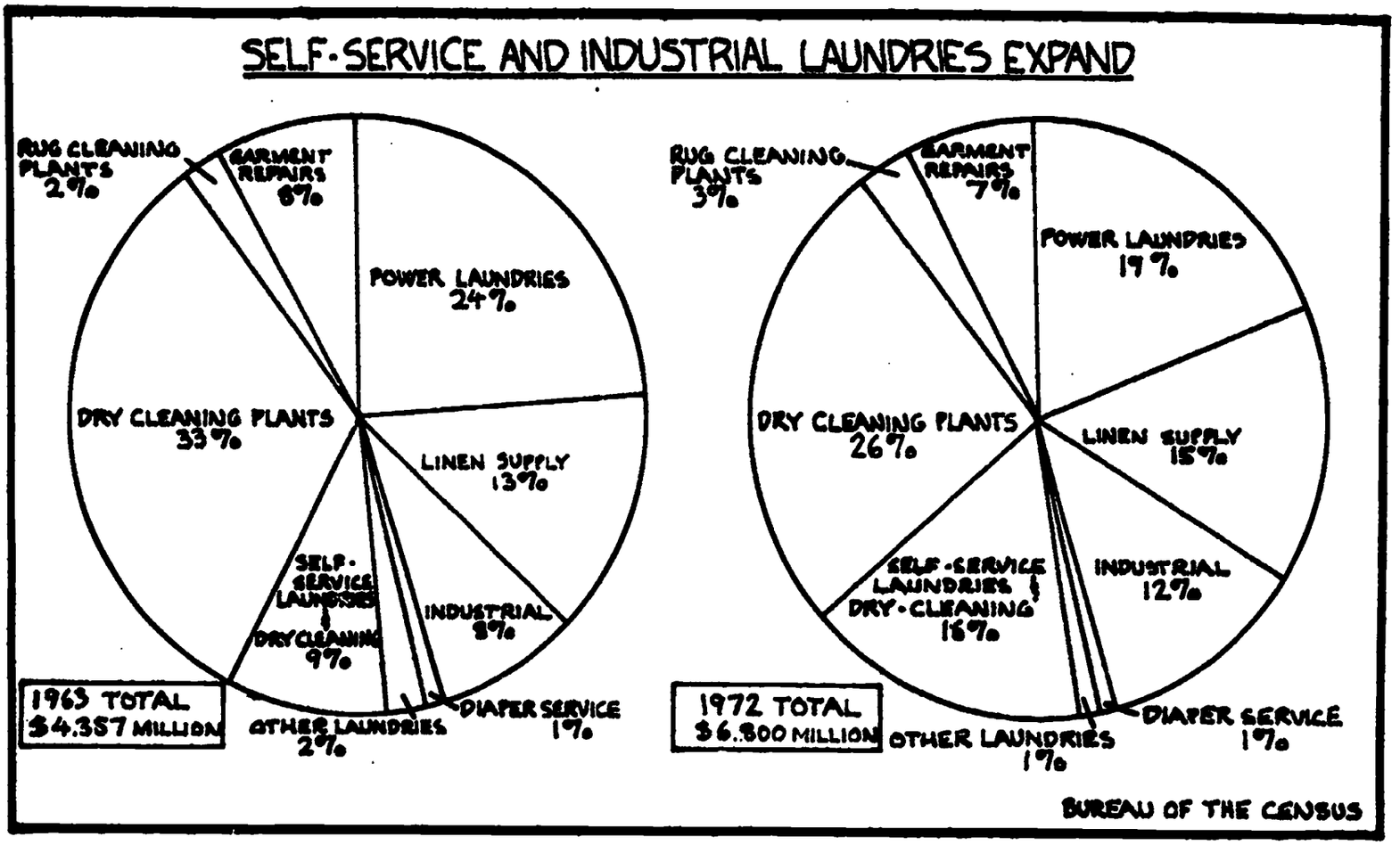
Occupation	1969 Number (000)	1969 Percent	1980 Number (000)	1980 Percent
Total	632	100	730	100
Professional, technical	0.8	0.1	1.5	0.2
Managers and proprietors	113.9	18.0	122.6	16.8
Clerical	91.6	14.5	129.1	17.7
Sales workers	10.7	1.7	8.9	1.2
Craftsmen, foremen	24.6	3.9	36.6	5.0
Operatives	372.8	59.0	410.3	56.2
Service workers	10.7	1.7	16.6	2.2
Laborer	6.9	1.1	4.4	0.6

Source: Bureau of Labor Statistics.

Greater mechanization and automation, and the introduction of new product and service technologies,

[1] Source of figures: *U.S. Industrial Outlook 1973*, U.S. Department of Commerce.

[2] Ibid.



characterize the developments in the clothing service fields of drycleaning and laundering. According to a U.S. Department of Labor report, "Initial training and retraining of workers will be essential . . . . to develop the skills requisite to make the transition from declining to growing parts of the industry, and from one job to another within plants." [3]

DESIRED COMPETENCIES

To a greater or lesser degree, depending upon their specific job, all drycleaning and laundering workers require the following general competencies:

1. Knowledge of fabrics and their properties.
2. An ability to handle and/or manipulate materials and equipment.
3. An understanding of the systems and processes in drycleaning and/or laundering.
4. A knowledge of the chemicals most suitable for the renovation and rejuvenation of textile products.
5. An understanding of garment construction.

[3] *New Technology in Laundering and Cleaning Services*, Monthly Labor Review, February 1972.

EDUCATIONAL PREPARATION

A young man or woman who has an occupational interest in drycleaning or laundering can enter as a relatively unskilled worker and, through employment experience, develop some elementary skills. While employed they may find a training program in which they can upgrade their job-skills by taking advanced studies in drycleaning or laundry.

The drycleaning and laundry industry, however, is becoming more sophisticated in its increasing diversification and expansion of services, and its use of new chemicals and equipment. Some specialized educational preparation that includes a cooperative work experience is more advisable for higher-skilled entry jobs and opportunities for career advancement. As is true for most occupations today, the level of initial employment tends to reflect the degree and level of education. Specialized preparation in drycleaning and laundering techniques also increases the students' potential for self-employment as a franchisee or entrepreneur, if that is an occupational goal.

As important as the vocational studies that develop the students' occupational competencies are disciplines that contribute to the "life skills" of the students and develop their social, civic and humanistic competencies.

Specifically important are communication and problem solving skills, arithmetic, and a science unit that is applicable to drycleaning and laundering chemicals, such as basic chemistry.

OCCUPATIONAL OPPORTUNITIES

Due to the ubiquitous nature of the industry's establishments, geographic employment opportunities are wide-spread and national in scope. The introduction of new technology and the growth of large-scale industrial drycleaning and laundering operations are shifting the distribution of occupations within the industry as a whole. The demand for qualified workers to perform the functions of maintenance, first-level supervision, planning, and scheduling will increase and the relative demand for machine operatives will decrease as a result of more mechanized equipment that is being used. Furthermore, opportunities for self-employment will expand because franchising as a method of business operation is a growing trend in this field.

The following chart presents an overview and examples of drycleaning and laundering occupations, typical places of employment, and brief descriptions of what workers do. The occupations and worker responsibilities are classified according to entry level jobs and advanced career opportunities. It has been checked by educators and employers who are in general agreement as to its accuracy.

Specific job titles and responsibilities may vary from place to place and from time to time as technologies and services change and different positions are created.

PROFILE OF OCCUPATIONS IN DRYCLEANING AND LAUNDERING

Entry Jobs

OCCUPATION	PLACES OF EMPLOYMENT	WHAT WORKERS DO
Drycleaner/ Spotter	Retail Drycleaners Industrial Drycleaners Wholesale Drycleaners	Examine articles to determine fiber content; know and follow fabric safety procedures to be used; know types of stains; select proper removal agents; remove stains; sort garments into proper classification; weigh and record loads; operate drycleaning machine; test condition of solvent; operate distillation/ filtration equipment; determine type of drying used and equipment needed.
Finisher (Drycleaning)	Retail Drycleaners Industrial Drycleaners Wholesale Drycleaners	Use steam presses, hand steam irons, and forming equipment to restore items to original size and shape.
Washman	Family Laundries Coin-operated Laundries Industrial Laundries Industrial Linen Rental Laundries	Wash family and industrial laundry by loading and unloading conventional washers or washer/extractors; record load; maintain proper supply levels of alkalies, bleach sours, etc; use proper spotting agents to remove stains not removed in washing cycle.
Counter Salesperson	Family Laundries Retail Drycleaners	Greet customers; receive work to be cleaned or laundered; advise customers of various services, specials, and specialty items featured; place customers articles in receiving area; assemble processed work; file customers' tickets; maintain good customer relations; handle complaints and adjustments.
Route Salesperson	Retail Drycleaners Wholesale Drycleaners Family Laundries Industrial Laundries	Sell drycleaning and/or laundering services; solicit new customers; serve and solicit business from established customers; promote and maintain good customer-organization relationships.

Advanced Career Opportunities

OCCUPATION	PLACES OF EMPLOYMENT	WHAT WORKERS DO
Solvent Scouring Machine-Operator	Knitting Mills	Select correct scouring and drying procedure for fabric; follow proper safety precautions and procedures; weigh/record loads of fabric; test condition of solvent prior to use; operate solvent scouring machine; remove fabric from machine; operate distillation/filtration equipment; clean and do simple servicing of scouring machine.
Organic Solvent Dyer/Printer	Textile Dyers Textile Printers	Select correct dyeing/printing procedures for fabrics/yarns; follow proper safety precautions and procedures; record amount of fabric being dyed/printed; test condition of solvent prior to use; check machine for faulty operation; operate dyeing machine/printing machine; operate filtration/distillation equipment; match colors if dyeing; check clarity of registration of pattern in prints; clean and do simple servicing of dyeing or printing equipment.
Plant Manager	Wholesale Drycleaning Plants Large Family Laundries Industrial Laundries Linen Rental Laundries Industrial Drycleaners	Supervise operation; maintain good quality control; keep volume of production operating costs low; expedite shipping and delivery; keep records that reflect all of above factors; handle personnel problems in the plant.
Washroom Superintendent	Large Family Laundries Industrial Laundries Linen Rental Laundries	Schedule work flow to get maximum production; maintain equipment on regular basis to assure good performance of equipment; order needed washroom supplies and equipment; work with people in plant on minor personnel problems; have responsibility for placement of new equipment and removal of old.
Manager Owner	Retail Drycleaners Family Laundries Wholesale Drycleaners	Purchase or assist in purchase of store; purchase equipment and supplies; supervise equipment installations; hire workers; dryclean or launder items and/or train workers to do so; promote additional sales; possibly service equipment.
Sales Representative	Industrial Linen Rental Suppliers Industrial Career Apparel Suppliers Wholesale Establishments	Solicit business from organizations such as banks, airlines, hospitals, restaurants and the like; maintain customer relationships.
Plant Owners	Industrial Drycleaners Industrial Laundries Linen Rental Suppliers Large Retail Establishments Wholesale Establishments	Organize, administrate, and supervise all aspects of plant and business operations.

THE DRYCLEANING AND LAUNDERING PROGRAM

It is expected and suggested that the program in this guide will not be applied to a given situation exactly as outlined. The material is presented to illustrate how a comprehensive drycleaning/laundering educational program can be organized. It aims to provide a suggested framework within which such training can be developed.

PROGRAM OBJECTIVES

A job-preparatory program must concentrate on employment objectives if it is to prepare occupationally competent individuals. Its approach must be realistic, pragmatic, and must identify with specific competencies needed.

The development of occupational competency has at least six components around which a program should be designed:

1. Training should prepare the individual to be a productive employee in an entry level job.
2. The training, combined with a reasonable amount of work experience, should prepare the individual to advance to positions of increasing responsibility.
3. The training should give the individual an understanding and appreciation of all of the functions operating within the business enterprise.
4. The foundation provided by the training should be broad enough so that the individual can do further study within his field. No program can be considered terminal in the sense that the student stops learning. The further study may be the reading of trade publications, new text references and/or formal education.
5. The technical training should be complemented by other educational disciplines that contribute to the social and personal development of the student. Employers want workers who are not only technically competent, but who have basic mathematical skills, who can communicate with people, and who can get along with others.
6. Training should develop the professional attitudes and behavior necessary to secure and hold a job.

The overall program suggested in this guide is designed to meet these requirements. It has been so designed as to lend itself to modifications and adaptations depending upon competencies to be achieved, time available for instruction, opportunities for employment, special needs and occupational goals of the students enrolled, varying types of educational institutions, and currently existing programs.

DESIRED BEHAVIORAL OUTCOMES

The aim of the program contained in this guide is to enable students to acquire the specific abilities needed for initial employment and to provide the knowledge necessary for career advancement and continuing study.

The fundamental background areas of instruction aim to enable students to acquire the following knowledge:

1. An understanding of textile fibers, fabrics, and finishes as they affect a garment's ultimate performance and care.
2. A comprehension of the elements of garment construction that have implications for drycleaning and laundering processes and procedures.

The skill development areas of instruction aim to develop the following competencies:

1. A comprehension of drycleaning and/or laundering principles and their application to the correct utilization of the equipment, procedures, and chemicals used to maintain and care for apparel and other textile products.
2. A proficiency in the usage of the drycleaning and/or laundering chemicals that remove stains and renovate textile products.
3. A knowledge of basic and ancillary drycleaning and laundering equipment, and an ability to operate this equipment efficiently.
4. An ability to use steam and pressure equipment to correctly mangle, fold and/or finish garments and other textile products.
5. An understanding of the principles of salesmanship and an ability to apply these principles to selling occupations in the drycleaning and/or laundering field.
6. An awareness of new ideas and concepts in the industry and of new developments in chemicals and machinery that relate to these concepts.

EXAMPLE OF A COMPREHENSIVE DRYCLEANING AND LAUNDERING PROGRAM*

Areas of Instruction	*Suggested Hours*		
	Class	*Laboratory*	*Total*
FUNDAMENTAL BACKGROUND			
Basic Textiles			60
Apparel Construction Analysis	25	20	45
BASIC SKILL DEVELOPMENT			
Spotting/Drycleaning I	22	38	60
Spotting/Drycleaning II	20	25	45
Finishing	21	39	60
Laundering	26	34	60
Principles of Salesmanship			45
CAREER ADVANCEMENT			
Leathers and Suede	11	15	26
Plant Maintenance	8	18	26
Industry Workshop			20
Plant Management	18	14	32

*This sample program can be modified in terms of hours and areas of instruction to suit the time, facilities, and objectives of varying stypes of educational institutions, and the job goals of the students.

THE PROGRAM AND OCCUPATIONAL RELATIONSHIPS

The relationship of the individual instructional areas to specific occupational opportunities and required competencies is demonstrated in Tables 1 and 2. Table 1 lists by numbers all of the instructional areas included in the suggested program. Table 2 shows the relationship of these areas to specific jobs. For example, if the occupational objective was that of a Laundry Washman, the suggested areas of learning would be 1,2,3,6,9. An occupational goal as a Salesperson would require areas 1,2,3,5,6,9,11.

The illustrations of these relationships should facilitate the adaptation of this curriculum and enable the user of this guide to adapt, lift out, or combine the instructional areas in different ways depending upon the level of competence to be achieved, the time available for instruction, and the capabilities, needs, and occupational objectives of individual students.

A student completing the entire program would, of course, have a greater variety of occupational alternatives at the entry job level, and a greater potential for faster and further career advancement.

Table I

Areas of Instruction

1 Basic Textiles
2 Apparel Construction Analysis
3 Spotting/Drycleaning I
4 Spotting/Drycleaning II
5 Finishing
6 Laundering
7 Leathers and Suede
8 Plant Maintenance
9 Industry Workshop
10 Plant Management
11 Principles of Salesmanship

Table II

Areas of Instruction Needed for Specific Job Preparation

Job	*Suggested Areas of Instruction*
Spotter/Drycleaner Trainee	1,2,3,4,5,7,8,9,10
Drycleaning Machine Operator	same
Solvent Scouring Range Operator	same
Solvent Dyeing Machine Operator	same
Drycleaning Store Owner	same, plus 11
Leather Processor	1,2,3,4,5,7,9,10
Finisher	1,2,3,5,9
Laundry Washman	1,2,3,6,9
Washroom Supervisor	1,2,3,4,6,8,9,10
Washroom Superintendent	same
Laundry Owner	same, plus 11
Salesperson	1,2,3,5,6,9,11

BRIEF OVERVIEW OF AREAS OF INSTRUCTION

Basic Textiles

Analyzes basic textiles with major emphasis on finished fabrics. Elements in the production of textiles are related to fabric hand, appearance, and performance properties.

Apparel Construction Analysis

Covers apparel construction terminology and the procedures and processes of apparel construction. Teaching content includes the design, costing, cutting, sewing, and finishing of apparel. Laboratory experiences provide students with opportunities to apply content to practical learning situations.

Spotting/Drycleaning I

Examines the fundamentals of spotting and drycleaning including the chemicals and equipment used. Basic types of stains and the procedures for their removal are discussed, as well as filtration and distillation problems and their solution. Laboratory experiences give students an opportunity to apply principles of practical drycleaning problems.

Spotting/Drycleaning II

Concerns itself with principles and practices of more complex drycleaning procedures and processes that relate to detergents, drying, load classification, water repellency, and sizing.

Finishing

Covers the principles and procedures of molding fabrics and the basic equipment used to finish garments, specialty items, and household textile items. Teaching content also includes the packaging of finished items and the importance of packaging for increasing sales and improving services.

Laundering

Covers laundering principles, procedures, equipment, chemicals, quality control, and the causes of laundering problems. Laboratory experiences with washroom equipment, types of soil, garment classification, and laundry chemicals develop students' laundering skills.

Leathers and Suede

Covers the more complex cleaning problems and processes involved in the spotting, cleaning, and finishing of leather products.

Plant Maintenance

Examines principles and procedures for the proper care and maintenance of drycleaning and laundering equipment and their relation to specific problems with electricity, plumbing, and safety factors.

Industry Workshop

Surveys the operations of different types of drycleaning and laundering enterprises in relation to selling services, personnel practices, equipment, chemical usage, plant management and the like. Guest speakers and field trips serve as the source for teaching content and learning experiences.

Plant Management

Covers the principles of plant layout and their application, quality control standards for production and packaging, personnel problems, and customer relations. Learning experiences provide students with opportunities to apply teaching content to practical problem-solving situations.

Principles of Salesmanship

Covers the effective selling of drycleaning and laundering services. Role-playing learning experiences give students the opportunity to apply selling principles and techniques in order to develop their selling competencies.

GENERAL PROGRAM CONSIDERATIONS

There are many administrative factors to be taken into consideration before a job-preparatory program is undertaken or expanded. Questions such as the following require affirmative answers:

1. Does such a program meet a *manpower and educational* need in the State or community and at a reasonable cost?
2. Is the present faculty, if any, qualified or can qualified faculty be obtained?
3. Will there be adequate financial support to provide the program with the necessary facilities and equipment, and to maintain it by providing continuing support for the proper instructional resources necessary for high quality programs?
4. Can provisions be made for effective guidance and placement services?

SURVEY OF NEEDS

The basic purpose of this or any other job-preparatory program is to prepare students for advantageous initial employment. It is obvious that a program of this type should not be undertaken unless:

1. There is every indication that it fills an educational or manpower need in the community or State and at a reasonable cost.
2. There is some assurance, as determined by a study, that there are advantageous and meaningful entry-job opportunities for enrollees of the program.

Those who believe that a program of this type may be needed in their institution should begin with a comprehensive regional, State and/or local study. It should be made with the help of people acquainted with the employment needs of the drycleaning and/or laundering industry. Such a survey is necessary to catalog the educational needs, to define community support, to evaluate available student population, and to form a basis for a decision as to whether or not to offer the program in whole or in part. Furthermore, no program should be undertaken unless there is strong indication that there will be a continuing need.

FACULTY

The effectiveness of a job-preparatory curriculum depends to a great extent on the competence and enthusiasm of the teaching staff. It is important for instructors in this program to be occupationally competent through bona-fide wage earnings experience in relevant occupations, and to have had or to be given instruction in the techniques of teaching. Occupationally experienced teachers add credibility and realism to a program.

The problem of identifying and recruiting qualified instructors is a very real one. If vocational or technical teachers with an understanding and appreciation of the industry are unavailable within the institution, some instructors may be recruited from industry who are available for teaching on a part-time basis. There are often industry professionals who are eager and able to teach 2 or 3 hours a day or some other agreed upon schedule.

Also, some individuals who have retired from industrial positions and who are physically and mentally alert, may be recruited as part-time instructors for areas of work in which they have had a successful experience.

Experience has shown that graduates of technical schools who have acquired suitable employment experience often become excellent teachers in job-preparatory curriculums. Persons with this background are more likely to understand the objectives, values, and unique instructional requirements of vocational-technical education, and often bring to the program the kind of enthusiasm which has meaning to the students they meet.

Programs of an occupational nature need to be kept up-to-date if they are to be effective in preparing people for employment. In-service training programs should be developed and used to help instructors with teaching techniques, use of instructional materials, planning instructional procedures, evaluation procedures, etc., and to update instructors in terms of new industry developments. Faculty members should also be encouraged to participate as active members of professional associations. Through their publications and meetings, such organizations serve as important sources of information for new instructional materials and continuing reports of new processes,

concepts, and developments related to their technologies. A list of these trade associations and professional societies can be found in the Appendix.

STUDENT ENROLLMENT AND SERVICES

It is recommended that there be some system for enrolling students who have a reasonable expectation of succeeding in all or a meaningful part of the program, since the effectiveness and success of the program will ultimately be measured by the job-performance of its enrollees.

Students entering the Drycleaning and/or Laundering program should be manually dextrous, be able to discern colors, have physical stamina, be non-allergic to chemicals, and enjoy working with machines. A high degree of interest and motivation is desirable.

General school records, aptitude test results, and information on exploratory experiences and activities can be useful tools in assisting potential students in making the decision on whether to enter this program or not.

Guidance and Counseling Services

Guidance and counseling are important in order to bring into the program students who have a basic understanding of the demands and rewards of the occupation, and who have the potential for developing the competence and confidence to meet the demands and achieve the rewards.

In view of individual differences, diverse occupational objectives, the variety of instructional areas, and the levels of training opportunity, the importance of informed and continuous counseling cannot be overemphasized. Teachers, coordinators and guidance personnel must assume responsibilities for:

1. Aiding students in their selection of educational and occupational objectives consistent with their interests and aptitudes.
2. Providing for assessment and recognition of individual student's competencies achieved or developed in previous educational programs and/or employment experiences.
3. Assisting students in a continual assessment of their progress toward their individual occupational goals.
4. Assisting students in revising their educational objectives if other interests and vocational goals emerge as students develop.

Students should also be involved in determining how much job preparation they want, how much they will undertake, and for how long. After completing their first goals, they could then be encouraged to participate in progressive levels of job preparation in order to broaden employment potential and satisfy maturing occupational choices.

Placement and Follow-Up Services

Effective occupational preparation is impossible if the school feels that its obligation ends when the students graduate. Placing the students on the job, and following up their successes and failures, provide the best possible information to the school on its own strengths and weaknesses.

An excellent placement record is important in attracting new enrollees. Also, a school that is successful in placing its students is more likely to have motivated students than a school that divorces itself from the placement responsibility.

Follow-up of employed graduates should be utilized to determine:

1. Graduates' success or failure in employment
2. Effectiveness and value of the program
3. Possible revisions to be made in the program.

Competency Certification

In industries such as drycleaning and laundering where employment certification is not prescribed, certification could be considered informal. Student records could be maintained in terms of the degree to which the student is able to perform one or more of the competencies needed for identified occupations. Another factor to be considered for competency certification is employer evaluations of the students' performance in cases where a cooperative training experience is provided.

STUDENT ORGANIZATIONS

Student clubs that are related to an instructional program should be encouraged and sponsored by faculty members. Groups such as these strengthen relationships among students, and develop leadership potential and an ability to work with other people. They also provide opportunities for students with similar interests to select and discuss areas about which they would like further information, and to invite guest speakers of their own choice.

These student groups should be directed by the students but faculty assistance and advice must be available whenever needed. To be encouraged also are affiliations with relevant student organizations that are national or statewide in scope.

ADVISORY COMMITTEES

The success of job-preparatory programs depends greatly upon the formal and informal support of industry advisory committees. Such committees serve without pay, as interested citizens.

The committee can be important as an aid in establishing, maintaining, and/or evaluating the program. Members can also be helpful in recruiting faculty, placing graduates, recommending and, in many cases, securing donations of instructional equipment and materials, providing assistance and facilities for field trips, assisting with training stations for cooperative training, and the like.

The committee should be made up of representatives of industry, trade associations, related business and industry and, where appropriate, local labor organizations in the community, area, or State for which trainees are being prepared. Committee members should be appointed on a rotating basis so that the duty will not become a burden to any individual member. Rotating memberships will also give other interested people an opportunity to serve. The average committee usually consists of about 12 - 20 members. Members should be invited and appointed by the responsible educational authority. The duties and responsibilities of the advisory committee should be clearly understood so that maximum service can be rendered.

For further information about advisory committees see (1) American Vocational Association, *The Advisory Committee and Vocational Education,* Washington, The Association, 1969 and (2) Riendeau, Albert J. *The Role of the Advisory Committee in Occupational Education in the Junior College,* Washington, American Association of Junior Colleges, 1967.

COOPERATIVE TRAINING

A good way to develop employment skills is through actual employment. To the extent that the labor market allows, cooperative work training should be a regular part of a job-preparatory program. It may be scheduled for a block of time planned for full-time employment during peak business periods or for a period of time during which part-time school attendance is alternated with part-time employment.

When employment is used, it should be considered an essential element in the educational process and should be related to the field of study in which the students are engaged. For example, many of the learning experiences suggested in this guide can be adapted for completion at the students' employment sites.

When students test and apply their school-learned theory in a work situation, study becomes more meaningful. Just as important, the student has an opportunity to learn the importance of reliability, cooperation, judgment, and other qualities associated with the successful worker. Through this exposure to the real world of work students' career choices are stimulated and shaped. Should they find through their work experience that they are not fitted for a specific area of work, they may decide to change their field of study. This decision may prevent them from wasting their time on a misguided career choice.

Specific employment is obtained, as circumstances permit, by a teacher-coordinator or a placement office within the educational institution. The institution regards the cooperative training technique as an integral part of the program as a whole. It is not regarded primarily as an earning opportunity, although all students are paid wages that are commensurate with those paid to beginning workers in the particular job for which they are employed. Job evaluation reports are submitted to the school coordinator by the employer and are then discussed with the student. Work reports are submitted by the students to the classroom instructor(s) who utilize them to reinforce instruction.

The cooperative training technique offers important advantages to students, to the school and to employers. It offers students an opportunity to gain the type of related experience that will make them more desirable as employees. As a result of their employment experience with a particular establishment, many students are offered permanent positions with that organization upon completion of their schooling. Regardless of their next steps, students establish employment records that are extremely important for future reference.

Cooperative education also provides opportunities for the educational institution to maintain close contact with employers. This contact becomes a valuable two-way channel of communication that helps the educational institution to keep its knowledge of specific employment needs up-to-date, and at the same time keeps employers acquainted with, and involved in, the program of the institution.

Ideally students should be exposed to work experience after they have acquired some of the basic skills required for entry jobs. At this point, they can render some meaningful service to the employer and in turn gain a realistic view into their chosen occupation. They will then be able to approach further study with a better understanding of the actual working conditions and career opportunities in their field.

Additional expenditures of time and money are necessary to locate work training stations and to supervise and counsel the students who are assigned to them. Few

expenditures, however, will bring a bigger return in linking education with productivity and in making schools effective in preparing young people for meaningful careers.

Specific suggestions for using the cooperative plan are available from vocational education directors in State Departments of Education.

SAFETY

Principles of safety should be taught and stressed as an integral part of each instructional area that involves handling of tools and equipment. By emphasizing careful procedures and by observing the normal safety practices, many dangers can be avoided. Strict adherence to the federal government's "Occupational Safety and Health Act" and to local, State, and city safety codes should be taught and reinforced, and all students must be made aware of their responsibilities under these laws.

The importance of protecting human life and limb is paramount, but students also need to learn good work habits and to develop a pride in workmanship. Teaching proper care and use of equipment is more important than teaching how to repair it as a result of negligence.

INSTRUCTIONAL EQUIPMENT

In determining and selecting instructional equipment, the need for every item should be established. Instructors should recognize that the purpose of laboratory and/or learning experiences is to teach or reinforce principles and basic skills. The latest and most expensive equipment is not always necessarily the best for instructional purposes. In many cases, simpler equipment may be more effective because it represents only the essentials. Equipment, however, should reflect current industry usage.

The possibility of getting donations of equipment from industry resources should be investigated by the local school or by the State vocational education offices. Advisory committees can be helpful in this area. The ingenuity of the instructor, however, will play the major part in governing the selection and cost of the instructional equipment. Suggestions for desirable facilities, specific equipment, layouts, and approximate costs are discussed in a separate section.

INSTRUCTIONAL MATERIALS AND CLASS OUTPUT

The specific instructional materials that are suggested for this program are included in the instructional outlines and are also discussed in the section on *Facilities, Equipment and Costs, Supplies.* The following are general suggestions for sources of supply for instructional materials and for possible utilization of class output that can have financial advantages to the program and can also enhance instruction:

1. Possible sources of materials without costs
   a. Brochures from manufacturers and suppliers of fabricare equipment, chemicals and supplies
   b. Used and inexpensive garments from such local charitable organizations as the Salvation Army, Goodwill Industries and Thrift Shops may be available for class demonstrations and laboratory learning experiences in exchange for drycleaning and laundering services to these organizations
   c. Donations of unclaimed garments from local drycleaning shops
2. Possible utilization of class output
   Where feasible and appropriate, it is suggested that industry activities be simulated in the classroom and that class output be financially utilized. The utilization of class output should be subject to guidelines to be established in consultation with the local advisory committee in order to avoid competitive factors.
   For example, in the drycleaning and laundering program contained in this guide, drycleaning and/or laundry services could be sold locally at cost or slightly above costs. This would give students a motivating industry-related work experience, and would create a regenerating fund that would help to provide the necessary instructional materials to continue this type of valuable learning experience and student motivational aid.

LIBRARY SUPPORT

A school library is the major source for the reading and reference facilities that are necessary in order to make an educational program fully effective. Instructors must recognize their responsibility for developing and enriching the resources of the library to support their curriculum, and for stimulating student use of the library. Assignments and projects calling for the use of the library enables the students to understand the research resources in libraries and how they relate to their present career choice.

The library should house trade journals, pamphlets, basic references, current books, and periodicals. Keeping abreast of new equipment and procedures is most important. Many new and different fibers are continually being introduced in fabrics for apparel and other textile products. Such non-textiles as plastics, leathers, and furs

are also used for garments and trimmings. Add to the foregoing the continuing new developments in cleaning chemicals and detergents, and one quickly realizes the importance of good library support to keep faculty and students updated on new product technologies. Keeping abreast of new equipment and processes is equally important.

A list of trade periodicals that report new developments in products, chemicals, equipment, and processes can be found in the *Bibliography* of this guide. It is suggested that the library subscribe to these periodicals for the use of faculty and students alike.

TEXTBOOKS, REFERENCES AND AUDIOVISUAL AIDS

Due to the dynamic nature of the industry, techniques, procedures, and product technologies are constantly changing. Textbooks, references, and visual aids must be reviewed continuously in light of new developments.

The texts and reference materials that are suggested in the instructional area outlines should be examined by the instructor and analyzed for content and relevancy; newer and more pertinent ones should be substituted as they become available. The information needed to cover a particular area of instruction is more often than not unavailable in texts; hence the absence of suggested texts in some areas and the multiple listing of references in others.

In many areas of instruction, it will be necessary for the teacher to develop his own teaching materials. Reading references must usually be augmented by mimeographed material reproduced by the instructor from current materials in trade publications and/or by brochures, bulletins, and reports from trade associations and from business firms within the fashion industry itself.

Audiovisual aids can be a great help in teaching but must be previewed before use in order to determine their timeliness and pertinency to a teaching objective. Only a few have been listed in this guide because changes in techniques and procedures tend to make films obsolete in a relatively short time.

It is expected and hoped that a skillful instructor will make liberal use of merchandise samples, slides, transparencies, charts, industry materials, and other visual aids that illustrate and visualize technical aspects of the content that is being taught. These again must usually be collected and/or prepared by the individual instructor. They must also be updated regularly in order to keep them current. Some suggestions for visual aids are included in the instructional outlines but the ingenuity of the instructor and/or department head must play the major part in the preparation and use of the instructional aids.

OUTLINES OF AREAS OF INSTRUCTION

The outlines of the areas of instruction that follow contain the subject matter to be included, the behavioral objectives, and brief instructional guidelines. They are organized according to teaching modules each of which contains suggestions for teaching content and student learning experiences. Suggested hours, prerequisites, approaches for student evaluation, and teaching resources are also included for each area of instruction. It is recommended that these materials be modified to suit the needs of local situations and to take advantage of the special interests, capabilities, and ideas of the teaching staff in a particular institution.

The importance of flexibility in varying behavioral objectives to meet the needs of individual students, and in allowing individual students sufficient time to develop at least one employable skill, cannot be over emphasized. While the successful completion of all objectives for each area of instruction and for the program in its entirety is desirable, this is not attainable by all students. It must further be remembered that skill development can only be "learned-by-doing", and that what one student can learn in one week may take three weeks for another.

The role of the teacher in education has changed from being primarily an information giver in large group sessions to functioning as a resource person, a motivator, a diagnostician, and an organizer — in sum, a learning manager. It is incumbent upon the teacher to:

- Assess the individual student's present skills and potential.
- Identify those behavioral objectives that individuals can attain.
- Encourage students to acquire at least one if not more marketable job skill, allow them sufficient time to do this, and emphasize the importance and interdependence of all operations in an employment setting.
- Individualize desired behavioral outcomes in order to obtain a sense of accomplishment for all students in the class.
- Encourage and motivate all students to continually strive for higher goals.

Although individualizing instruction is not easy, it is necessary if the overall objectives of job-preparatory programs are to be achieved.

The suggestions for evaluation that are included in the outlines offer but a few approaches. Regardless of the evaluation techniques that are used and of their frequency — whether they be written, oral, or performance assessments — evaluation should be in terms of the desired behavioral objectives. In addition, students should be made aware of all objectives and kept aware of their own performance and progress as it appears to the instructor.

Fundamental Background Instruction

BASIC TEXTILES

Prerequisites: *None*

Suggested Hours: 60

Behavioral Objectives

This area of instruction should enable students to:

1. Use the terminology that is identified with the textile industry, as it relates to drycleaning and laundering processes.
2. Know fabric characteristics as they relate to appearance, hand, expected performance, end product use, maintenance and care.
3. Perceive the relationship between fiber properties, fabric types, end product requirements, and care factors.
4. Understand the major systems of yarn manufacturing and their effect on the properties of finished textile products, as they relate to drycleaning, pressing and laundering processes.
5. Comprehend the methods of fabric construction that determine the characteristics of fabrics and affect their maintenance and care.
6. Be familiar with the coloring methods applied to fabrics and how they are affected by stain removal and care processes.
7. Be familiar with the various types of finishes used on textile materials, and their relationship to their maintenance and care.
8. Be familiar with federal laws and regulations as they apply to fabrics, and their implications for the Drycleaning and Laundering field.

Instructional Guidelines

This area of instruction is an introduction to textiles, with major emphasis on finished fabrics and their maintenance and care.

It is suggested that a representative cross-section of fabric swatches be distributed to the students, and that frequent reference be made to these samples in order to illustrate their relationship to drycleaning and/or laundering processes. Traditional fabric types should comprise the major portion of the students' samples, and the classical names of these fabrics, as used in the Drycleaning and Laundering industry, should be employed. Fabric manufacturing should be related to fabric hand, appearance, expected performance, and care. These in turn should be related to end-product use. The study of finished fabric characteristics should be reinforced as the student progresses through the study of the various manufacturing elements that affect the end product, with particular stress on how these elements relate to their drycleaning and laundering.

Teaching Modules

	Suggested Hours
I. Introduction and Orientation	3
II. Fabric Characteristics	6
III. Fibers	9
IV. Yarns	6
V. Methods of Fabrication	15
VI. Dyeing and Printing	12
VII. Finishing	6
VIII. Federal Laws and Regulations	3
Total Hours ----	60

I. INTRODUCTION AND ORIENTATION

Teaching Content

A. What Are Textiles?
   1. Definition of fiber
   2. Definition of yarn
   3. Definition of fabric

B. Concept of Basic Textile Constructions
   1. Fiber type
   2. Yarn type
   3. Method of fabrication
   4. Method of coloring
   5. Finish

C. The Flow of Textiles (relationship between levels and functions of each).
   1. Fiber producer
      a. Natural
      b. Man-made

2. Yarn mill
   a. Spinning
   b. Throwing
3. Fabric mills
   a. Weaving
   b. Knitting
   c. Tufting
   d. Other
4. Converters and their function
5. Dyeing, printing and finishing plants
6. End product manufacturers
   a. Apparel
   b. Home Furnishings
   c. Domestics
   d. Industrial
7. Retailers
8. Drycleaners and/or Launderers

Learning Experiences

1. Have students examine the apparel they are wearing and distinguish between fiber, yarn and fabric.
2. Have students make a list of business enterprises in the local area that are involved in different levels of production, distribution, and care of textiles.
3. Show and discuss film, *Cloth: From Fiber to Fabric* or *Textiles For Everyone.*

II. FABRIC CHARACTERISTICS

Teaching Content

A. Describing Fabric Appearance
   1. Color
   2. Pattern
   3. Texture

B. Describing Fabric Hand

C. Describing Fabric Weight
   1. By end product use
   2. By care needed

D. Determining Face and Back of Fabrics
   1. Major characteristics
   2. Designer choice
   3. Factors limiting designers
   4. Possible drycleaning and/or laundering problems

E. Fabric Traditional Names
   1. As used in drycleaning field
   2. As used in laundering field

Learning Experiences

1. Have students go through various fabrics in their bundle of fabric swatches. Each fabric should be described, named if a traditional drycleaning or laundering name is known for that fabric, the face identified, and the care specified.
2. Assign students to find three traditional fabrics in their homes and classify them according to fabric name, fibers used, description of the fabric, the end product, and the type of care needed to properly refurbish them.
3. Have students see how many different fabrics they can identify by traditional industry fabric name in their home, and by the care needed for each one.

III. FIBERS

Teaching Content

A. Classification of Fibers
   1. By origin
   2. By generic class
   3. By filament or spun

B. Properties of Fibers
   1. Major properties of each generic class
   2. Related to fabric appearances, hand, and performance
   3. Related to maintenance and care processes
      a. Drycleaning
      b. Laundering

C. Modification of Fibers
   1. Chemical variations
   2. Modified physical shape
   3. Effect of drycleaning or laundering

D. Methods of Fiber Identification (limitations and value of each)
   1. Burning and other simple tests
   2. Microscopic examination
   3. Fiber identification stains
   4. Chemical solubility: quantitative identification

E. Grades of Fibers
   1. Cotton
      a. Staple length
      b. Color
   2. Wool
   3. Man-made fibers

Learning Experiences

1. Demonstrate some simple fiber identification tests such as the burning test, the wet-dry strength test, a simple acid test, to identify the content of several unknown fiber fabrics and have students perform similar tests. Relate these tests to procedures used by drycleaning and laundering firms.
2. Have students examine their own wardrobes and begin a chart showing the fiber content, the description of the end product item, and the proper type of cleaning and care. Have students allow room on the chart to add information about

the other elements of fabric manufacture that will be presented in this area of instruction.

3. Arrange a field trip to a fiber producer, cotton gin, cotton or wool warehouse, or the opening room of a mill during this module.
4. Show and discuss film: *The Way It Is With Man Made Fibers.*
5. Plan a field trip to a large drycleaning and/or laundering establishment and have a firm representative discuss the importance and need for knowing about fibers, and the procedures used to identify fibers.

IV. YARNS

Teaching Content

A. Types of Yarns and Properties of Each
   1. Spun
      a. Cotton system
      b. Wool system
   2. Filament
   3. Textured filament
   4. Stretch yarns
   5. Novelty yarns
   6. High bulk yarns
   7. Ply yarns

B. Yarn Numbering Systems
   1. Relationship to weight
   2. Major systems used
      a. Denier: rule of denier
      b. Count: rule of count
      c. Tex: rule of tex number

C. Yarn Quality Factors
   1. Uniformity
   2. Neppiness
   3. Fuzziness
   4. Strength
   5. Relationship to drycleaning and/or laundering processes

Learning Experiences

1. Using a yarn of known size, have students approximate the yarn size of several yarns of unknown size. These may be taken from fabric samples given to the students, and the effect of yarn size on the fabric hand and appearance can be disucssed.
2. Select various fabric samples and have the student identify the quality factors of the yarns used, the type of yarn, the relationship between the yarns and the fabric appearance and hand, and the care needed.
3. Have students refer back to the chart begun in the module on fibers, and add to each item information about the yarn, its effect on the finished product, and how it should be drycleaned and/or laundered.
4. Show and discuss film: *Yarns Used in Making Cloth.*

V. METHODS OF FABRICATION

Teaching Content

A. Woven Fabrics
   1. Loom motions
   2. Woven fabric terminology
   3. Basic weave formation
   4. Special weave effects and potential drycleaning and/or laundering problems.
      a. Leno
      b. Pile
      c. Dobby
      d. Jacquard
   5. Fabric count
      a. Relationship to drycleaning
      b. Relationship to laundering

B. Knitted Fabrics
   1. How knit fabrics are formed
      a. Weft knitting
      b. Warp knitting
   2. Knitted fabric terminology
   3. Basic weft knit fabrics
      a. Types and characteristics
         1) Jersey
         2) Rib
         3) Links
      b. Possible drycleaning and laundering problems
   4. Basic warp knit fabrics
      a. Types and characteristics
         1) Tricot
         2) Raschel
      b. Possible drycleaning and laundering problems

C. Tufted Fabrics
   1. How formed
   2. End products in current use
   3. Characteristics
   4. Possible drycleaning and/or laundering problems

D. Non-woven Fabrics
   1. How formed
   2. End products in current use
   3. Characteristics
   4. Possible drycleaning and/or laundering problems

E. Other Fabrication Methods
   1. Types and characteristics
      a. Lace
      b. Braid
   2. Possible drycleaning and/or laundering problems

Learning Experiences

1. Arrange a field trip to local mills that either weave, knit, tuft, or produce non-wovens, and/or show and discuss film: *Construction of Cloth*. Discuss types of fabrics in terms of their implications for drycleaning and/or laundering.
2. Have students identify the fabrication method employed to produce the fabrics in their swatch bundle and list one possible drycleaning and/or laundering problem inherent in each fabric.
3. Have students add to their chart (started in Module III):
   a. Information about the fabrication method and and its effect on the finished fabric.
   b. The possible effects of drycleaning and/or laundering on the fabrics.

VI. DYEING AND PRINTING

Teaching Content

A. How Fabrics are Colored
   1. Solution dyeing
   2. Chemical reaction with dyestuff
   3. Resin bonded pigments

B. Properties of Dye and Fiber Relationships to Drycleaning and/or Laundering
   1. Affinity
   2. Relative cost
   3. Color fastness
   4. Metamerism
   5. Availability of shades

C. Major Dye Classes in Current Use
   1. Fibers on which each is used
   2. Properties of each class

D. Colorfastness
   1. Colorfastness and end use
   2. Effect of drycleaning and/or laundering on color
   3. Simple tests

E. Methods of Dyeing
   1. Recognition of each
      a. Stock
      b. Top
      c. Yarn
      d. Piece
         1) Cross dye
         2) Union dye
   2. Reason for each
   3. Drycleaning and/or laundering problems of each

F. Methods of Printing
   1. Roller
   2. Screen
      a. Hand
      b. Machine
      c. Rotary
   3. Heat transfer
   4. Other methods

G. Types of Prints
   1. Types and recognition
      a. Direct
      b. Discharge
      c. Resist
      d. Blotch
      e. Overprint
      f. Duplex
      g. Flock
      h. Burn-out
      i. Warp
   2. Possible drycleaning and laundering problems of each

H. Comparison of Wet-Process Prints and Pigment Prints
   1. Processing steps
   2. Cost
   3. Properties of each
   4. Effects of drycleaning and laundering processes on each.

Learning Experiences

1. Have students use a vegetable such as beets, onion, cabbage, etc. to prepare their own dyes. This is done by boiling the vegetable for a long period of time and then straining the solution. Then the students can try to dye a cellulose fiber, a protein fiber, and a synthetic fiber in the dye they made. These dyed samples can then be tested for colorfastness to light, laundering, and drycleaning chemicals.
2. Have students identify the method of coloring used on a variety of samples from the fabric bundles and suggest possible problems in drycleaning or laundering.
3. Have students add to their chart, begun in Module III, the method(s) of coloring, and the possible problems in drycleaning or laundering their fabrics.

VII. FINISHING

Teaching Content

A. Purpose of Finishing
   1. Alteration of hand
   2. Alteration of appearance
   3. Creation of performance characteristic

B. Nature of Finishing
   1. Mechanical processes
   2. Chemical additives

C. Major Types of Finishes and Fabrics on Which Used
   1. Preparatory finishes
      a. Shrinkage control
      b. Bleaching
      c. Singeing
      d. Others
   2. Basic finishes
      a. Types of finishes
         1) Calendering
         2) Napping
         3) Brushing
         4) Filling
         5) Mercerizing
         6) Others
      b. Effects of drycleaning and laundering
   3. End use finishes
      a. Types
         1) Flame retardants
         2) Water repellents
         3) Stain repellents
         4) Permanent press
         5) Others
      b. Drycleaning and laundering effects

Learning Experiences

1. Using treated and untreated samples of similar fabrics, demonstrate a water repellent finish and a flame retardant finish. Demonstrate how drycleaning and laundering could affect each finish.
2. Have each student identify the probable finishes employed on ten different samples from their fabric bundle, and the possible effects of drycleaning or laundering each.
3. Refer again to the chart begun in the fibers module and have the students add (a) information on visible or tactile finishes, and expected finishes, and (b) the implications for drycleaning and laundering.

VIII. FEDERAL LAWS AND REGULATIONS

Teaching Content

A. Fiber Labelling Laws
   1. Wool Products Law
      a. Virgin or new fiber
      b. Re-processed fiber
      c. Re-used fiber
   2. Textile Fiber Products Identification Law
      a. Historic reasons for legislation
      b. Requirements of law
      c. Definition of terms
      d. Advertising requirements
   3. Flammability Laws
      a. History
      b. Current standards and test methods
      c. Outlook for additional standards in future
      d. Effect on textile industry
   4. Care Labelling Laws
      a. History
      b. Current status
      c. Requirements
      d. Standard and test methods

B. Implication of Laws for Drycleaning and Laundering

Learning Experiences

1. Have students bring in labels, or advertisements that feature labels, for analysis and discussion of fiber contents. Discuss how these laws relate to drycleaning and laundering.
2. Using special, incorrectly prepared labels, have students identify the illegal labels and rewrite them correctly.

Suggested Evaluation

1. Given a set of swatches, students may be evaluated on their ability to recognize 40 - 50 basic fabrics by:
   a. Classic name of fabric
   b. Method of construction
   c. Type of yarn used
   d. Finishes where apparent
   e. Appropriate end uses
   f. Reaction of fabric to drycleaning and/or laundering.
2. Students may be evaluated on their ability to do a cloth count of either a woven or knitted fabric and show the relationship of this information to drycleaning and laundering the fabric.
3. Students can demonstrate their awareness of laws relating to textiles by documenting information provided by a salesperson or clipping news items.

Teaching Resources

TEXTS AND REFERENCES

Cowan, M. *Introduction to Textiles*
Hall, A. J. *The Standard Handbook of Textiles*
Hollen, N. and J. Saddler. *Textiles*
Joseph, M. *Introductory Textile Science*
Linton, G. *Applied Basic Textiles*
Potter, D. and B. Corbman. *Textiles: Fiber to Fabric*
Stout, E. *Introduction to Textiles*
Wingate, I. *Textile Fabrics and Their Selection*

PERIODICALS

American Fabrics
Daily News Record
Modern Textiles

AUDIOVISUAL AIDS

Cloth: Fiber to Fabrics. 17 min., 16mm color film, sound
Encyclopedia Brittanica, Education Corporation, 425 N. Michigan Ave., Chicago, Ill. 60611

Construction of Cloth. 25 min., 30 color slides with written commentary and 20 fabric swatches keyed to program
Fairchild Visuals, 7 East 12th St., New York, N.Y. 10003

Introduction to Textiles. 30 min., 32 color slides with written commentary and 18 fabric swatches keyed to program
Fairchild Visuals, 7 East 12th St., New York, N.Y. 10003

Yarns Used in Making Cloth. 25 min., 32 color slides with written commentary and 22 fabric swatches keyed to program
Fairchild Visuals, 7 East 12th St., New York, N.Y. 10003

Textiles for Everyone. 15 min., color filmstrip, sound
American Textile Manufacturers Institute, 1501 Johnston Building, Charlotte, N.C. 28200

The Way It Is With Man-Made Fibers. 27 min., 16mm color film, sound
E. I. Dupont de Nemours and Co., Product Information Section, Textile Fibers Dept., Centre Road Bldg., Wilmington, Del.

INSTRUCTIONAL SUPPLIES

- Swatch bundles (as described in Instructional Guidelines)
- Fabric labels
- Samples of current fabrics
- Testing equipment and supplies

APPAREL CONSTRUCTION ANALYSIS

Prerequisites: *None*

Suggested Hours: 60

Behavioral Objectives

This area of instruction should enable drycleaning and laundering students to:

1. Be familiar with the various size ranges in apparel and their proportional relationships.
2. Understand the elements of style and their relationship to the shape of garments.
3. Recognize construction details that may cause maintenance and care problems.
4. Be aware of drycleaning and laundering problems due to findings and trimmings on garments.

Instructional Guidelines

In this area of instruction, drycleaning and laundering students should gain a sufficient understanding and appreciation of apparel construction to recognize the part that proper maintenance and care plays in the continued fashionable and correct appearance of a garment.

As garment details and construction are presented and analyzed, emphasis should be placed on their implications for drycleaning and laundering. Extensive visual materials, consisting mainly of actual garments, should be used to demonstrate the teaching points that are covered. Current photographs, sketches and other illustrations may be used to supplement the garments.

Although no prerequisite area of instruction is essential, it would be desirable for students to have had some basic instruction in drycleaning and/or laundering so that they can evaluate the relevance of apparel construction elements within the context of the problems encountered in garment maintenance and care.

Teaching Modules

	Suggested Hours	
	Class	*Laboratory*
I. Understanding Sizes	2	3
II. Understanding Apparel Shapes	6	5
III. Construction Details	4	3
IV. Findings and Trimmings	3	4
Total Hours – – – –	15	15

I. UNDERSTANDING SIZES

Teaching Content

A. Scope of Size Ranges
   1. Infants
   2. Toddlers
   3. Children's
   4. Boys and girls
      a. Slim
      b. Regular
      c. Chubby
   5. Sub-teens
   6. Juniors
      a. Young juniors
      b. Junior petites
      c. Juniors
   7. Misses
   8. Women's
   9. Half-sizes
   10. Stouts
   11. Men's
      a. Short
      b. Regular
      c. Long
      d. Stout
      e. Shirts: collar size and arm length
      f. Slacks: waist and leg length

B. Analysis of Sizes
   1. Proportions
   2. Relationships
   3. Differences

Learning Experiences

1. Have students analyze a group of demonstration garments and discuss the:
   a. Size and size range of each garment
   b. Proportionate dimensional relationships between size ranges
   c. Type of styling appropriate for each size range
   d. Fabric appropriate to size range and function of clothing
2. In order to become more familiar with clothing sizes, have students select a given number of illustrations from advertisements in newspapers and magazines as examples of various size ranges, mount their clippings in a scrap book, and label them accurately.

II. UNDERSTANDING APPAREL SHAPES

Teaching Content

A. Style Elements and Distinguishing Characteristics
   1. Silhouettes
      a. Sheath
      b. Shift
      c. A-line
      d. Tent
      e. Princess
      f. Shirtwaist
      g. Empire
      h. Dropped waistline
      i. Surplice: wrapped
      j. Jumper
   2. Skirts
      a. Basic skirt
      b. Wrap-around
      c. Gored
      d. Circular: flared
      e. Trumpet
      f. Dirndl: peasant
      g. Pegged
      h. Sarong
      i. Bell
      j. Dome
      k. Tunic: overskirt
      l. Peplum
      m. Tiered
      n. Flounce
      o. Hip yoke
      p. Built-up waistline
   3. Necklines
      a. High round
      b. Low round
      c. Bateau
      d. Off the shoulder
      e. Key hole
      f. Oval "Horse Shoe"
      g. Sweetheart
      h. Square
      i. "V" shaped
      j. Built-up neckline
      k. Cowl
      l. Draped twist
      m. Halter
   4. Collars
      a. Convertible
      b. Two-piece shirt
      c. Mandarin
      d. Band
      e. Crew
      f. Turtle
      g. Bias roll
      h. Peter Pan
      i. Choir boy
      j. Sailor
      k. Shawl
      l. Tailored: notched
   5. Sleeves
      a. Fitted set-in
      b. Two-piece tailored
      c. Roll-up
      d. Shirtwaist
      e. Bishop
      f. Bell
      g. Leg O' Mutton
      h. Puffed
      i. Circular cape
      j. Lantern
      k. Melon
      l. Petal
      m. Kimono
      n. Dolman
      o. Kimono with a gusset
      p. Raglan
      q. Dropped shoulder
   6. Cover ups
      a. Vest
      b. Bolero
      c. Battle jacket
      d. Box jacket
      e. Safari jacket
      f. Blazer
      g. Trench coat
      h. Polo coat
      i. Coachman's coat
      j. Cape
   7. Trousers
      a. Long: flared, straight, tapered
      b. Culottes

c. Shorts
d. Bikinis
e. Bloomers

8. Pleats
a. Kick
b. Inverted
c. Box
d. Side
e. Sun-burst
f. Accordion
g. Crystal
h. Unpressed

B. Maintenance and Care Considerations
1. Style elements requiring special handling.
2. Implications for pressing and finishing.

Learning Experiences

1. Have students examine and identify the style elements of the clothing that they are wearing, and discuss how these elements can best be maintained during a laundering and/or drycleaning process.
2. In order to increase their familiarity and understanding of style characteristics, have students clip examples of various style details and shapes from advertisements, mount them, and identify them correctly.
3. Distribute fabric to students and have some press examples of different types of pleating, and others pin fabric into different types of pleats.

III. CONSTRUCTION DETAILS

Teaching Content

A. Position of Grain in Garments
1. Straight
2. Cross
3. Bias

B. Seams
1. Plain: recommended width
2. Seam finishes
3. Number of stitches per inch
4. Types of thread
a. Fiber
b. Size

C. Linings and Facings
1. Interfacing
2. Backing
3. Lining
4. Interlining

D. Maintenance and Care Considerations
1. Puckering
2. Retention of shape
3. Durability of seams
4. Linings
5. Others

Learning Experiences

1. Have students examine and analyze the construction details of the garments they are wearing, and identify potential maintenance and care problems due to poor construction.
2. Have students discuss and analyze maintenance and care problems that they themselves may have encountered pertaining to:
a. Puckering of garments caused by poor construction
b. Durability of seams
c. Retention of shape
d. Linings and interlinings
e. Others
3. Borrow a group of "problem garments" from a local drycleaner and present to the class for their evaluation and analysis of construction details that may have caused drycleaning or laundering problems.
4. If students have already had basic laundering and/or drycleaning areas of instruction, have students dryclean or launder:
a. Garments with backings, linings or interlinings
b. Garments cut on the straight grain and garments cut on the bias
c. Garments stitched with various types of seams
Have students evaluate and discuss results as related to construction details.

IV. FINDINGS AND TRIMMINGS

Teaching Content

A. Fasteners
1. Buttons
a. Sew-through
b. Shank
c. Materials: plastics, metal, bone, self covered, jewelled
d. Buttonholes: machine stitched, bound
2. Zippers
a. Sizes and use
b. Materials: metal, plastic
c. Invisible
d. Decorative
3. Gripper snaps
4. Snap fasteners
5. Hooks and eyes

B. Belts
1. Fabric on backing

2. Plastic
3. Leather
4. Buckles

C. Embroideries
1. Hand work
2. Schiffli
3. Beading

D. Laces
1. Hand made
2. Machine made
3. Cotton
4. Nylon

E. Braids
1. Cotton
2. Rayon
3. Wool
4. Peasant
5. Ric-rac

F. Banding
1. Straight
2. Bias

Learning Experiences

1. Have students examine and identify the findings and trimmings on the garments that they are wearing.
2. Have students report on maintenance and care problems that they, themselves, may have experienced with findings and trimmings on their own garments.
3. Show class examples of various types of findings and trimmings, and have students evaluate and discuss possible maintenance problems.
4. Demonstrate the cleaning and pressing of both straight and bias bending, and show examples of the twisting problems that may arise when bias bandings are not cut on the true bias.
5. Invite a resource person into school to discuss with the students the drycleaning and/or laundering problems that he/she has encountered as a result of poor construction, findings and trimmings, style elements, and the like. Have resource person bring in examples of "problem" apparel to show to the class.

Suggested Evaluation

1. Evaluation may be based on evidence that demonstrates the student's ability to analyze a group of actual garments and identify, by the correct terminology:
   a. The silhouette of the garment
   b. The style elements
   c. The construction details
   d. The type of fastening
   e. The type of seams used
   f. The trimmings
   g. Potential maintenance and care problems and their reasons
2. The students' scrap-book of Modules I and II may be evaluated for:
   a. Completeness of coverage
   b. Correct identification of mountings
   c. Correctness of terminology

Teaching Resources

TEXTS AND REFERENCES

Basic Professional Terminology. Fashion Institute of Technology, 227 West 27th St., New York, N.Y. 10001

Reich, Berman & Heger. *Essentials of Clothing Construction*

INSTRUCTIONAL SUPPLIES

- Charts that illustrate the proportional relationships of the various size ranges
- Samples and/or illustrations of style elements discussed in Module II
- Fabric samples for pressing pleats
- Ironing boards and hand irons
- Actual garments that illustrate various construction details, trimmings and findings
- Examples of "problem" garments that have been drycleaned and/or laundered
- Examples of trimmings and findings

Basic Skill Development Instruction

SPOTTING/DRYCLEANING I

Prerequisites: *Basic Textiles*

Suggested Hours: 60

Behavioral Objectives

This area of instruction should enable students to:

1. Differentiate between stains, and the methods of removing them with professional drycleaning equipment.
2. Know and apply the correct cleaning formula to different classes of stains.
3. Identify different types of solvents and their effects.
4. Know the basic types of drycleaning machinery, the factors determining the extent of mechanical action, and the fabric and mechanical considerations relating to their use.
5. Understand the components in a drycleaning machine that relate to filter types, and to filter and solvent impurity problems.
6. Operate different types of stills and resolve common distillation problems.

Instructional Guidelines

An examination of the fundamentals of stain removal and drycleaning procedures which include the chemicals and professional equipment used in the industry is the focus of this area of study.

Emphasis should be placed on the correct handling of equipment and supplies, and on the importance of following proper procedures. Instruction on how to operate the different types of filters, reclaimers and stills should be included. Safety factors should be stressed and constantly called to the attention of the students.

In order to develop the students' spotting/drycleaning skills, lectures should be kept to a minimum and laboratory experiences maximized.

Teaching Modules

	Suggested Hours	
	Class	*Laboratory*
I. Spotting Overview	4	8
II. Stain Removal	4	8
III. Drycleaning Solvents	4	2
IV. Drycleaning Machines	4	6
V. Filtration and Soil	4	8
VI. Distillation	2	6
Total Hours — — — —	22	38

I. SPOTTING OVERVIEW

Teaching Content

A. Chemistry of Spotting
   1. Types of stains
      a. Wetside and dryside stains
      b. Properties of stains
      c. Types of soil
   2. Methods of stain removal
      a. Solvent action (dissolving)
      b. Lubrication (penetrating, slipping, lifting)
      c. Chemical action (camouflaging)
      d. Digestion

B. Professional Drycleaning Equipment
   1. Washing unit
   2. Compressor
   3. Reclaimer
   4. Spotting board
   5. Others

Learning Experiences

After demonstration of equipment and procedures for removing stains, have students identify and remove wetside stains using professional spotting equipment and chemicals.

II. STAIN REMOVAL

Teaching Content

A. Types of Stains
   1. Tannin and formula
   2. Albuminous
   3. Tannin/protein combinations

4. Ink
5. Dryside

B. Recognition of Stains
1. Color
2. Spread of stain
3. Stiffness of fabric
4. Penetration of color

C. Removal Agents
1. Bleaches
2. Trade formulas
3. Chemicals

Learning Experiences

After demonstration of stain removal, have students identify and remove different types of stains requiring the following:

a. Bleaches
b. Tannin formula
c. Combination formula
d. Ink stain formula
e. Albuminous formula
f. Dryside formula

III. DRYCLEANING SOLVENTS

Teaching Content

A. History of Drycleaning
B. Solvents
1. Historical
a. Naptha
b. Benzine
c. Turpentine
2. Current
a. Flourinated hydrocarbon
b. Chlorinated hydrocarbon
c. Petroleum based

C. Considerations of Solvents
1. Flammability (flash point)
2. Volatility
3. Costs
4. Cleaning applications and limitations

Learning Experiences

Have students identify and compare different types of solvents in terms of flammability, volatility, costs, effectiveness, and limitations.

IV. DRYCLEANING MACHINES

Teaching Content

A. Types of Machinery
1. Split recovery
2. Single recovery

B. Factors Determining the Extent of Mechanical Action
1. Type of washer
2. Size of load
3. Speed of washer
4. Solvent level
5. Others

C. Extraction
1. Mechanical considerations
2. Fabric considerations

Learning Experinces

After a demonstration of cleaning units, have students select the proper machinery for garments given to them and explain the reason for their selection.

V. FILTRATION AND SOIL

Teaching Content

A. Types of Solvent Impurities
B. Filter Powders
C. Types of Filters
D. Common Problems
1. Filter
2. Soil

Learning Experiences

1. Have students select the correct filter system to remove soil and impurities.
2. Have students explain their choice of filter systems in terms of:
a. Ease of use
b. Filtering power
c. Cost of replacement
3. Have students operate filtering system.

VI. DISTILLATION

Teaching Content

A. Types of Stills
1. Atmospheric
2. Vacuum
3. Cookers

B. Common Distillation Problems

Learning Experiences

1. Demonstrate distilling operation in a Cargille-Wagner type unit and show actual still in a drycleaning unit.
2. Distribute bench distilling units to students and give students samples of dirty solvents for them to distill and then record the amount of impurities and solvents remaining.

Suggested Evaluation

1. Given four severely stained garments, students are evaluated on their ability to:
   a. Remove (in a given time) stains without damaging the garment or its color.
   b. Identify those stains that are not removable without damage to the garment or its color, and demonstrate with examples.
2. Students select enough garments to make up one washer load and are evaluated on:
   a. Their ability to select and use the correct cleaning equipment to properly dryclean the selected garments, taking into account positive and negative mechanical action factors and mechanical and fabric considerations
   b. Their application and utilization of the correct drycleaning solvent to cleanse the garments in the washer
   c. Their ability to operate and maintain the filter and still used with the washer.

Teaching References

TEXTS AND REFERENCES

Fulton, G. P. *Applied Science for the Drycleaner*
Phillips, E. R., and H. Reeves. *Drycleaning*
Pocketbook for the Drycleaner
Randlett, J., and W. Nicklow. *Spotting*
Seitz, W., and C. D. Jacobs. *Principles and Practices of Drycleaning*
Smith, S. *Spotting Primer*

AUDIOVISUAL AIDS

How to Buy and Care For Your Clothes, 18 min., color film-strip sound
Neighborhood Cleaners Assoc., 116 East 27th Street, New York, N.Y. 10016

Seven Keys to Fabric Service, 12 min., color filmstrip, sound
International Fabricare Institute, Joliet, Ill., 60431

INSTRUCTIONAL SUPPLIES

- Garments and swatches
- Sufficient quantities of petroleum solvent, petroleum solvent 140 degrees F., chlorinated hydrocarbon, flourinated hydrocarbon (Valclene®)
- Rigid filter tube; flexible filter tube; cartridge filter; activated carbon — i.e. darco®, sweetener powders
- Line drawing transparencies of filtering systems
- Line drawing transparencies of complete drycleaning reclaimer still and storage tanks
- Cargille-Wagner Distilling unit, Cedar Grove, N.J.

SPOTTING/DRYCLEANING II

Prerequisites: *Spotting/Drycleaning I*

Suggested Hours: 45

Behavioral Objectives

This area of study should enable students to:

1. Effectively operate different drying units.
2. Understand the different types of detergents and the correct use of water in "charged" systems.
3. Understand the factors relating to proper load classification and pre-loading inspection.
4. Identify basic drycleaning problems and relate them to the appropriate and optimum solutions.
5. Utilize the proper soaps, chemicals and procedures for wet cleaning products.
6. Be proficient in water repelling processes.
7. Understand the implications of sizing and utilize the proper methods to size garments.

Instructional Guidelines

Applying the knowledge and understanding gained in Spotting/Drycleaning I, students develop advanced spotting skills and acquire advanced understanding of industry drycleaning practices and problems by means of continued laboratory learning experiences.

The topics of wet cleaning, water repellency, and sizing are presented from the professional drycleaner's point of view. The areas to be covered require that emphasis be placed on occupational competency and the ability to return a properly cleaned garment to the customer. Stress should be on obtaining the best results with the least possible cost and trouble.

Safety factors must be taught and reinforced constantly.

Teaching Modules

	Suggested Hours	
	Class	*Laboratory*
I. Drying	2	2
II. Detergents	6	4
III. Load Classification	4	6
IV. Trouble Shooting and Drycleaning Problems	2	6
V. Wetcleaning	2	6
VI. Water Repellency	1	2
VII. Sizing	1	1
Total Hours – – – –	18	27

I. DRYING

Teaching Content

A. Types of Drying Units
   1. Non-Recovery: petroleum
   2. Recovery
      a. Chlorinated hydrocarbons
      b. Fluorinated hydrocarbons

B. Physical Factors
   1. Solvent type
   2. Time required
   3. Capacity of dryer

C. Fiber and Fabric Considerations

D. Drying Cycles
   1. Fluorocarbon
   2. Petroleum
   3. Perchlorethylene

Learning Experiences

Have the students compare drying time of selected fabric constructions with known fiber content when using petroleum solvents as contrasted to chlorinated hydrocarbons and fluorocarbons on the basis of:

1. Solvent type
2. Time required to dry fabrics
3. Type of dryer
4. Capacity of dryer

II. DETERGENTS

Teaching Content

A. Functions and Types
   1. Removal of soluble and insoluble soil
      a. Mechanical action with insoluble soil

b. Moisture and soluble soil
2. Synthetic detergents
a. Batch method
b. Special problems (ink, lipstick, etc.)

B. Charged Systems
1. Concentration of detergent
a. High: increase in soil removal
b. Permits moisture into system
2. Need for optimum detergent concentration

C. Use of Water
1. Bound moisture versus free moisture
2. Relative humidity and solvent relative humidity
3. Disadvantages of free water
4. Use of a rag load
5. Moisture control systems
a. Uses
b. Limitations
6. Emulsion systems

Learning Experiences

Have the students set up an arbitrary equilibrium, and have them check the solvent relative humidity in the solution using hygrometer or any moisture control system. Then have students bring equilibrium back into "balance" using above instruments as a guide.

III. LOAD CLASSIFICATION

Teaching Content

A. Machine Factors Determining Classification
1. Mechanical action
2. Extraction
3. Moisture
4. Static electricity

B. Garment Elements Determining Consideration
1. Color
a. Transfer and bleeding
b. Color categories
2. Fiber content
3. Fabric construction

C. Operating Procedures Applicable to Load Classification
1. Silks
a. Hard
b. Sized
c. Fragile
d. Embossed
2. Woolens
a. Knit
b. Soft
c. Fragile
d. Hard
3. Rainwear
a. As hard woolens
b. Exception: soft woolen linings
4. Household products
a. Soft woolens
b. Fragile household products
c. Difficult household products

D. Inspection Before Loading
1. Rips, tears, color changes
2. Separate collars, cuffs, etc. to be attached
3. Ornamentation: buckles, buttons, hooks, clips, metal trim
4. Pockets emptied
5. Pants cuffs to be checked for dirt
6. Solvent soluble articles to be identified
7. Drapes, curtains, slip covers to be checked for weak areas
a. Sunlight
b. Atmospheric gases

Learning Experiences

Working in teams, have students load a drycleaning unit and:
1. Determine the factors applicable to the load they are loading.
2. Note the garment factors that they took into consideration.
3. Decide the needed operating procedure for their load.
4. Inspect and note any rips, tears, articles in pockets, etc. found in garments.

IV. TROUBLE SHOOTING AND DRYCLEANING PROBLEMS

Teaching Content

A. Eight Basic Problems
1. Shrinkage
2. Wrinkling
3. Soil redeposition
4. Dye transfer
5. Suales and streaks
6. Linting
7. Loss of sizing
8. Poor soil removal

B. Checklist for Good Drycleaning Results
1. Washer loading
2. Solvent purity
3. Filter pressure
4. Solvent flow
5. Distillation
6. Detergent concentration

7. Moisture
8. Heat
9. Brightness
10. Lint removal
11. Stain removal

Learning Experiences

Have each student make a chart with the eight basic problems vertically listed on one side and with the following headings listed horizontally across the top in this order: Moisture; Load Classification; Mechanical Action; Extraction; Tumbling; Filtration Static Electricity. Have students relate the problems on the side of chart to the factors across the top of the chart.

V. WETCLEANING

Teaching Content

A. Explanation of Wetcleaning
   1. When used
   2. Relationship to customers
   3. Customer claims on wetcleaning
B. Soaps and Detergents
   1. Their "ph" and purpose
   2. Properties of detergents
C. Wetcleaning Chemicals
   1. Water softeners
   2. Alkalies
   3. Acids: sour bath for neutralization
   4. Bleaches
D. Wetcleaning Procedures
   1. Scrub table
   2. Washing machine
   3. Corrective procedures for whitening
E. Wetcleaning Requiring Special Handling
   1. Fragile knit goods
   2. Angora wool
   3. Metallics
   4. Sequins
   5. Sheer fabrics
   6. Satins
   7. Comforters and blankets
   8. Slipcovers and drapes
F. Bath Bleeding

Learning Experiences

After a demonstration of wetcleaning procedures, have students wetclean garments and/or other products, using the proper and necessary detergents and chemicals. Have students check and evaluate each others' procedures and results.

VI. WATER REPELLENCY

Teaching Content

A. Explanation
   1. Porous finish: garment breathes
   2. Degree of permanency: 1-3 cleanings
B. Methods used
   1. Wetside
      a. Spray
      b. Dip
   2. Dryside
      a. Spray
      b. Dip

Learning Experiences

1. Give students a swatch of untreated porous fabric and have them treat fabric, using dryside method of water repellency. Give students a second swatch and have them treat fabric, using wetside method of water repellency.
2. Have students test the above treated fabrics, using spray tester or hygrostatic rain tester, and evaluate the results.

VII. SIZING

Teaching Content

A. Use and Effect of Sizing
   1. Effect on drycleaned garments
   2. Criteria of sizing
B. Methods used
   1. Dryside spray or dip
   2. Wetside spray or dip

Learning Experiences

Have students apply both wet and dryside sizing to different swatches, and compare with swatch not sized. Then have students note results of their experiences and draw conclusions for an evaluation.

Suggested Evaluation

1. Evidence of students' ability to load a washer within a given time, and use procedures that demonstrate their understanding of "load classification" in terms of:
   a. Garment or fabric types
   b. Ornaments and trims
   c. Areas of weakness
   d. Removal of superfluous materials
2. Select appropriate type of drycleaning detergent and chemicals.

3. Stipulate and apply the correct water amount for a "charged" system, and demonstrate its use in dry-cleaning machines.
4. Operate the drying equipment, taking fiber and fabric factors into consideration.
5. Given a garment and a wet-cleaning case problem involving the garment, students may be evaluated on their ability to:
   a. Recognize that the garment must be "wet-cleaned"
   b. Apply the correct detergent and chemicals in wet cleaning the garment
6. Evidence of students' ability to utilize the proper methods and correct procedures to "water repel" a garment.
7. Evidence of student's ability to utilize proper methods and procedures in sizing a garment.

Teaching Resources

TEXTS AND REFERENCES

Same as for Spotting/Drycleaning I

INSTRUCTIONAL SUPPLIES

- Same as for Spotting/Drycleaning I plus
- Hygrometer
- Hygrostatic tester

FINISHING

Prerequisites: *Basic Textiles*

Suggested Hours: 60

Behavioral Objectives

This area of study should enable students to:

1. Understand the elements of molding, and apply them to the efficient operation of the basic finishing equipment used in drycleaning organizations.
2. Select the proper equipment for different types of drycleanable items, and utilize correct procedures to finish these items.
3. Be familiar with possible types of packaging and service attachments, their implications, and approximate costs.

Instructional Guidelines

This area of study is concerned with the molding elements, equipment, and procedures that are used in drycleaning organizations to finish apparel and household fabric items. It also addresses itself to the all important task of packaging finished items.

After students have attained an understanding of finishing equipment, major emphasis and time should be given to the development of finishing skills in the laboratory with a minimum of time spent on classroom theory. The use of proper procedures should also be stressed.

Safety factors must be constantly emphasized since students will be working with large amounts of pressure and excesses of live steam.

Teaching Modules

	Suggested Hours	
	Class	*Laboratory*
I. Molding -- Elements and Equipment	3	7
II. Procedures in Finishing		
Garments	10	20
Household Items	2	5
Specialty Items	2	5
III. Packaging and Service Attachments	4	2
Total Hours ----	21	39

I. MOLDING -- ELEMENTS AND EQUIPMENT

Teaching Content

A. Elements in Molding
   1. Types of steam
   2. Moisture
   3. Pressure

B. Basic Equipment and Its Use
   1. Utility press
   2. Topper-Legger
   3. Steam-Air equipment
   4. Puffers
   5. Specialty equipment
      a. Drapery presses
      b. Ties
      c. Others
   6. Press padding
      a. Types of padding
      b. Fibers

Learning Experiences

1. Show students molding equipment in the school laboratory, and demonstrate its use.
2. Take class on a field trip to observe finishing procedures in a drycleaning establishment.

II. PROCEDURES IN FINISHING

Teaching Content

A. Equipment and Applications to Garments
   1. Sweaters
   2. Skirts
   3. Trousers
   4. Jackets
   5. Coats
   6. Dresses

B. Finishing Household Items
   1. Drapes
   2. Slipcovers

C. Finishing Specialty Items
   1. Pleats
   2. Fluting
   3. Dressmaking details
   4. Ties

Learning Experiences

1. Have students prepare all finishing equipment for use.
2. Have students practice finishing different types of garments given to them.
3. Have students finish either drapes or large pieces of fabric made to simulate drapes, using correct equipment and techniques.
4. Have students finish fabrics made to simulate slip covers.
5. Have students perform proper finishing techniques on fabrics made to simulate specialty items discussed in class.

III. PACKAGING AND SERVICE ATTACHMENTS

Teaching Content

A. Types of Packaging and Attachments
   1. Garment bags
   2. Skirt packaging
   3. Boxed items
   4. Service attachment memorandums
      a. Replacement of buttons
      b. Minor repairs

B. Purposes of Packaging and Service Attachments
   1. Advertising messages on packages and attachments
   2. Customer relations
   3. Competitive advantages

C. Costs of Services and Packaging
   1. Labor
   2. Materials
   3. Evaluation of advantages

Learning Experiences

1. Demonstrate different types of packaging, and have students approximate their costs and justify their use.
2. Have students compose advertising messages to be placed on bags and packages.
3. Have students suggest additional types of packaging and service attachments, approximate their costs, and justify their use.

Suggested Evaluation

1. Given such different types of drycleanable items as garments, household items, and specialty items, students may be evaluated on their ability to:
   a. Select the appropriate type of molding and finishing equipment to properly finish a prescribed variety of items
   b. Efficiently operate specific types of finishing equipment and finish the items within the amount of time required by industry standards
   c. Apply correct methods and techniques in finishing the items.
2. Given a case problem for a hypothetical drycleaning organization, students may be evaluated on evidence of their ability to:
   a. Suggest realistic and feasible packaging and service devices
   b. Approximate their costs
   c. Justify their use

Teaching Resources

TEXTS AND REFERENCES

Dernanium, H. *Finishing Techniques for Textile Maintenance Industry*

Pocketbook for the Drycleaner

Riggott, C. and J. Bauman. *Finishing Quality and Methods*

INSTRUCTIONAL SUPPLIES

- Garments (as varied as possible) for finishing
- Drapes
- Large fabric swatches
- Plastic garment bags
- Packaging examples
- Diagrams of perfectly finished garments

LAUNDERING

Prerequisites: *Basic Textiles*

Suggested Hours: 60

Behavioral Objectives

This area of study should enable students to:

1. Understand correct washroom chemicals and their applications to different types of laundry.
2. Utilize the proper washroom supplies to load, balance, wash, and unload washers.
3. Maintain correct moisture levels and safety precautions in operating extractors and conditioners.
4. Utilize the proper equipment, chemicals, and techniques in removing stains from launderable items.
5. Distinguish between causes of fabric and garment damage in order to prevent those resulting from laundering operations.

Instructional Guidelines

This area of instruction, which aims to develop the students' skills in operating the basic washer, is also concerned with the recognition and classification of laundry problems prior to washing. The problems of spotting are as real in laundering as in drycleaning, and students should be taught how to remove the types of stains that laundering cannot eliminate. In addition, students should be instructed in how to distinguish between the possible causes of fabric and garment damages, as they relate to faulty laundering procedures versus faulty products. Major emphasis, however, should be on skill-development learning experiences.

Teaching Modules

	Suggested Hours	
	Class	*Laboratory*
I. Fabric Recognition	4	4
II. Operating of Washers	4	8
III. Extracting and Conditioning	4	6
IV. Spotting	10	12
V. Causes of Fabric and Garment Damage	4	4
Total Hours ----	26	34

I. FABRIC RECOGNITION

Teaching Content

A. Types of Laundry
   1. Recognition and limitations of various fibers
   2. Laundry classification by colors
      a. White
      b. Fast colors
      c. Fugitives
   3. Laundry classification by fibers
   4. Processing for quality
      a. Customer satisfaction
      b. Serviceability

B. Washroom Chemistry
   1. Tests for water hardness
   2. "Titration" check
   3. Proper utilization of washing supplies
      a. Detergents
      b. Bleaches
      c. Sours (alkalies)
      d. Brighteners

Learning Experiences

1. Have students identify types of launderable items in test bundles, by fiber limitations and by colors.
2. After demonstration of tests, have students perform water hardness and titration tests.

II. OPERATING OF WASHERS

Teaching Content

A. Effective Use of Washroom Supplies
   1. Quality washroom results
   2. High performance and production results
   3. Efficient cost control
   4. Recognition of application

B. Loading and Balancing
   1. Conventional washers
   2. Safety precautions

C. Reasons for Recording Washroom Loads
   1. Equipment utilization
   2. Efficient work flow
   3. Cost control
   4. Incentive earnings

D. Unloading of Washer
   1. Efficient methods
   2. Safety precautions

Learning Experiences

1. Have the students properly and safely load and balance a conventional washer.
2. Have the students compute the proper washroom supplies needed for correct washing formula based on load of wash, and make entries with regard to proper records.
3. Have the students properly and safely unload a conventional washer.

III. EXTRACTING AND CONDITIONING

Teaching Content

A. Determination of Moisture Retention Levels
   1. Conditioners
   2. Extractors

B. Maintenance of Safety

C. Protection of Customer Goods
   1. In extractor
   2. In conditioner

Learning Experiences

Have students load and unload extractor and conditioner units taking into consideration their personal safety and the safety of the customer's goods.

IV. SPOTTING

Teaching Content

A. Stain Recognition
   1. Methods of recognizing various types of stains
   2. Determination of proper course of action
      a. Solvent action for wet or dryside
      b. Mechanical action with lubricant
      c. Chemical action
         1) Bleaches
         2) Oxidizing
         3) Reducing
      d. Digestion

B. Stain Removal Principles
   1. Elements of efficient and safe stain removal
      a. Fiber and fabric identification
      b. Stain identification
      c. Knowledge of spotting chemicals used
      d. Safe methods used in removal
   2. Objectives of stain removal
      a. Maximum stain removal
      b. Safety of garment and spotter
      c. Least amount of time
   3. Equipment used
      a. Spotting boards
         1) Cold type
         2) Air vacuum
      b. Spotting guns
      c. Spotting brushes
      d. Spatula
      e. Towels and cheese cloth
      f. Blotters

C. Methods of Stain Removal
   1. Solvent action
      a. Wet solvent: water
      b. Dry solvent
         1) Amyl acetate
         2) Volatile dry solvent (V.D.S.)
         3) Oily type paint remover (O.T.P.R.)
   2. Lubrication
      a. Suspends, lifts, penetrates
      b. Mechanical action assists
   3. Chemical action
      a. Acids neutralize alkalies and vice versa
      b. Acetic acid (28%)
      c. Oxalic acid
      d. Lactic acid (general formula)
      e. Hydroflouric acid (rust remover)
      f. Ammonia (26%)
   4. Digestion: protein and albuminous stains
      a. Stains originating from the body
      b. Makes something soluble that was unsoluble

D. Stain Removal Procedures
   1. Sweet stains
   2. Tannin stains
   3. Albuminous stains
   4. Combination stains
   5. Protein formula
   6. Dryside stains

Learning Experience

Have students analyze pre-selected garments, identify the type of stain, the best stain removal technique, and remove stains in economical amount of time.

V. CAUSES OF FABRIC AND GARMENT DAMAGE

Teaching Content

A. Types of Fabric Damage
   1. Color damage

2. Shrinkage
3. Faulty construction
4. Mechanical damages
5. Laundering damages

B. Causes of Damage
   1. Color
      a. Bleeding
      b. Poor dyestuff penetration
      c. Crocking
      d. Perspiration
   2. Faulty construction
      a. Inadequate seam allowance
      b. Poor stitching
   3. Mechanical
      a. Cuts
      b. Tears
      c. Burns
   4. Laundering damages
      a. Improper chemicals
      b. Water temperatures

Learning Experiences

Give students garments and/or swatches of fabrics that have been prepared with different types of damages. Have students examine samples, identify type of damage and probable cause, and explain if and/or how damages could be prevented.

Suggested Evaluation

1. Given enough garments and items to make up one washer load (amount to be decided on by student and assessed by instructor), the students may be evaluated on their ability to:
   a. Select the correct laundering equipment to properly wash the items selected
   b. Employ the correct washroom chemical, i.e. bleaches, alkalies, detergents, softeners, when loading and balancing the washer
   c. Efficiently wash the items selected, maintaining correct balance of water, washroom chemicals, and heat, taking into account:
      1) factor of water hardness
      2) fabric and garment types
      3) trim and ornaments
      4) color of items and color fastness
   d. Efficiently and safely operate extractors and conditioners
2. Given four severly stained items, students are evaluated on their ability to:
   a. Recognize stains that are not removable without damage to the items and explain why
   b. Recognize those stains that can be processed and remove them within a specified time without damage to the item

Teaching Resources

TEXTS AND REFERENCES

Laundry Washroom Handbook
Perdue, G. R. *The Technology of Washing*

INSTRUCTIONAL SUPPLIES

- Water hardness tester
- Titration tester
- Diagrams and cutaways of washers, extractors and conditioners
- Spotting boards and equipment
- Garments for testing

PRINCIPLES OF SALESMANSHIP

Prerequisites: *Basic Textiles; Spotting/Drycleaning I,* and/or *Laundering*

Suggested Hours: 45

Behavioral Objectives

This area of instruction should enable students to:

1. Understand the importance of personal selling and the occupational selling opportunities in the drycleaning and laundering field.
2. Recognize the types of information that are needed for successful selling, and the possible sources of such information.
3. Apply basic salesmanship techniques and procedures to the selling of drycleaning and laundering services.
4. Adapt and apply basic selling techniques and principles to industrial selling situations.
5. Apply the product knowledge acquired in prerequisite studies to the selling of drycleaning and laundering services.

Instructional Guidelines

This area of instruction is designed to develop the students' self-confidence and their competency in selling drycleaning and laundering services. It covers the basic principles and techniques of salesmanship that are equally applicable to retail and industrial selling in the drycleaning and laundering field.

Because of the greater number of job opportunities in over-the-counter retail selling as opposed to industrial selling, teaching content and learning experiences emphasize the application of selling techniques, procedures and principles within the retail selling environment. However, a module on industrial selling is included and it can be expanded depending upon the employment opportunities in the community, the interests and job goals of the students, and the design and objectives of the school program.

Role-playing should be the major method of instruction, and lecture time should be kept to a minimum. To learn the viewpoints of salespeople and customers, all students should be given as many opportunities to play both roles as class time permits. Field trips, on-site observations, and sales-training aids, used by local establishments, that may be available for loan, could further serve to give the students an insight into "real life" selling observations. It is recommended that instructors solicit community resources for sales training aids that can be used as instructional materials, and obtain their permission for student observations and shopping reports.

Teaching Modules

	Suggested Hours
I. Nature and Importance of Personal Selling	6
II. Essential Knowledge for Selling	8
III. Selling Principles and Techniques	17
IV. Selling in Industrial Establishments	8
V. Preparation for Professional Selling Careers	6
Total Hours ———	45

I. NATURE AND IMPORTANCE OF PERSONAL SELLING

Teaching Content

A. Definition of Salesmanship

B. Importance of Selling
   1. Importance to the general economy
   2. Importance to customers
   3. Importance to employers
   4. Importance to the drycleaning and laundering industry

C. Types of Selling
   1. Non-personal
      a. Advertising
      b. Display
      c. Publicity
      d. Self-service
   2. Personal
      a. Counter selling
      b. Telephone selling

c. Door-to-door route selling
d. Industrial selling

D. Methods of Compensation
1. Salary
2. Commission
3. Combinations

E. Occupational Opportunities in the Drycleaning/Laundering Field
1. Places of employment
a. Retail establishments
b. Industrial firms
2. Career progression and advancement
a. Retail establishments
b. Industrial firms
c. Professional selling careers

Learning Experiences

1. Have students identify and list retail and industrial firms in the community that are in the drycleaning and/or laundering business, and decide which personal selling methods might be advantageously used by each type of firm. Discuss the need for selling and the factors that influence the methods of selling that are used.
2. Have each student examine the clothes that they are wearing and analyze each item for (a) how and where it was bought, (b) what selling procedures and/or activities were involved, and give their opinion of the salesperson's knowledge. Have students come to conclusions on the importance of the salesperson in a customer's final decision to buy.
3. Have students report on their personal experiences with "good" and "bad" salespeople, and explain their classification of the salespeople as "good" or "bad." Have class come to conclusions on the characteristics of an effective salesperson.
4. Arrange a field trip to a local industrial drycleaning and/or laundering enterprise. Ask for a sales representative to discuss with the students the personal selling activities of the firm and their importance.
5. Assign some students to observe, for a given time, the selling activities and procedures in local retail drycleaning and/or laundering stores, and report the activities that they observed to the class. Have class discuss the differences and similarities of retail and industrial selling activities.

II. ESSENTIAL KNOWLEDGE FOR SELLING

Teaching Content

A. Knowledge of Apparel and Textile Products
1. Need for knowledge
a. Selection of suitable services
b. Use of correct terminology
c. Communication
2. Scope of knowledge
a. Fabrics and finishes
b. Apparel construction
c. Apparel and textile terminology
d. Appropriate care factors
3. Sources of information
a. Hangtags and labels
b. Co-workers
c. Supervisors
d. Advertisements
e. Manufacturers' trade brochures
f. Libraries
g. Personal experiences
h. Trade associations

B. Knowledge of the Business Enterprise
1. Policies of the firm
2. Services available
a. Benefits
b. Limitations
3. Prices
4. Guarantees

C. Knowledge of Customer "Psychology"
1. Major motives for buying clothing services
a. Emotional
b. Rational
c. Complexity of buying clothing services
2. What customers expect from salespeople

Learning Experiences

1. Divide class into groups of salespeople and customers. Have each group discuss and come to conclusions on what they should or what they want to know about the drycleaning/laundering services that they are selling or buying. For example, customers may want to know washability, cleanability, stain removal, etc.; salespeople may want to know construction features, maintenance and care limitations and possibilities, prices, etc. Have class come to conclusions on the information a customer expects from salespeople, and what a salesperson should know.
2. Have each student collect a given assortment of apparel and textile hangtags, labels, advertisements, and bill enclosures. From each item collected, direct students to list the information in it that may be useful in advising consumers about the drycleaning or laundering of the item. Display the various student collections, and have students evaluate the different types of items as a source of product or service information for salespeople.

3. Have students discuss why they or their families might use drycleaning and/or laundering services, and have class come to conclusions on the implications of their reasons to salespeople who sell these services.

III. SELLING PRINCIPLES AND TECHNIQUES

Teaching Content

A. Principles
   1. The selling process . . . the *AIDA* pattern
      a. Getting *attention*
      b. Developing *interest*
      c. Creating *desire*
      d. Inducing *action*
   2. Procedures in effective salesmanship
      a. Approaching customers
      b. Determining of customer's needs and wants
      c. Presenting merchandise and/or services
      d. Meeting and overcoming objections
      e. Closing the sale
      f. Suggesting additional merchandise and/or services

B. Approach to Customers
   1. Importance of prompt approach
   2. Types of approaches
      a. Service
      b. Merchandise
      c. Social
      d. Combination
   3. Avoidance of sterotyped approaches

C. Determination of Customer Wants and Needs
   1. Importance of determining needs quickly
      a. Prevention of lost sales
      b. Establishment of customer confidence
      c. Saving of time
      d. Prevention of customer dissatisfaction
      e. Evaluation of available services for customer wants
   2. Methods of determination
      a. Direct questions
      b. Initial requests by customer
      c. Customer reaction to sales presentation

D. Sales Presentation
   1. Development of selling points
      a. Telling the facts
      b. Emphasizing and selling the customer benefits
   2. Development of a selling vocabulary
      a. Use of customer "language"
      b. Use of correct terminology
      c. Avoidance of stereotyped words and phrases
   3. Presentation of services
      a. Respectful handling of customer's belongings
      b. Demonstration of services
   4. Handling and overcoming complaints and objections

E. Closing the Sale
   1. Overcoming concerns
   2. Confirming services desired by customer
   3. Confirming completion of services

F. Suggestion Selling
   1. Explanation of suggestion selling
   2. Types
   3. Timing
   4. Benefits to customer
   5. Benefits to salespeople

Learning Experiences

1. Have class practice and evaluate selling approaches by mean of *Flash Card situations*. For example, prepare situations similar to the following on flash cards, for response by individual students within 10 seconds in answer to the question "What approach would you use?"
   a. A customer approaches the selling counter. You, the salesperson, are not busy.
   b. A customer is waiting and you, the salesperson, are just completing a transaction.
   c. You, the salesperson, have just begun to serve a customer. Another customer approaches you and tells you he/she is in a great hurry.
2. Assign students to prepare a given number of examples of customer approaches.
3. Have class practice *Starter Questions* in determining customer needs. For example, if a customer says, "I need this cleaned immediately," a starter question might be, "Will (the time normally needed for service) be quick enough?" If a customer says, "I want to have this garment dyed," a starter question might be, "What color would you like?"
4. Have each student list 5 hackneyed or expressionless words or phrases that are often overused in selling situations such as "nice," "just fine," "high class" etc., and have class discuss their reaction to the selling effectiveness of these words.
5. Have students prepare a list of "Magic Selling Words" that they consider lively, effective, and appropriate for drycleaning and laundering service selling, and that makes use of correct terminology. Direct students to use varied sources of information such as labels, tags, advertisements, dictionaries, brochures, and identify their sources.
6. Have some students role-play a series of prepared or spontaneous selling situations using their own clothing for merchandise. Have class observe, evaluate,

and discuss approaches, sales talks, selling presentations, and closings of sales.

7. Have students report on any merchandise or services that they themselves (or friends and relatives) may have bought as a result of suggestion selling by a salesperson, and discuss and classify these purchases according to suggestions for (a) extra quantities or services, (b) related items or services, (c) specially priced merchandise or services, (d) new products or services, (e) others.
8. Have students role-play a series of prepared or spontaneous selling situations, and give the "salesperson" instructions to include an example of suggestion selling. Direct the students who are observing the role-playing to note and evaluate the use and techniques of suggestion selling.
9. Have a class do short practice exercises in overcoming objections or handling complaints by having students (a) write an example of a hypothetical objection or complaint as a customer might express it, (b) exchange cards with a fellow student, (c) respond to the objection that they received.
10. Assign each student or groups of students to prepare a brief narrative report of an actual selling situation for "acting out" or for reading to class for a discussion of selling procedures and techniques. The following is suggested as an example of a selling situation:

    "Salesperson greeted me pleasantly and I told her I would like to know if they could clean a fur trimmed black coat. The salesperson said they could and asked if I would like to have the fur cleaned by the "furrier method." When I inquired as to what that was, the salesperson reacted vaguely and quickly answered me that the garment would look as good and clean as a new one. The price for the cleaning of coat was $15. I hesitated, with the coat in my hand, and said I would have to ask my wife/husband before I did anything. The salesperson said nothing. What should have been done to try to better advise the customer and make the sale?"

11. Prepare situations that relate to *Selling Judgment*, and distribute to student groups. Have group discuss the situation, and select a group leader to report their "selling judgment" to the class for a class evaluation and discussion of group answers. The following is an example of a situation: "A customer comes in to pick up a garment that has been drycleaned and pays for it. While the salesperson is bagging the garment, he/she notices a small hole in it which the customer has not noticed. What's *your* selling judgment?"
12. Have students role-play different types of prepared situations that call for the use of creative selling techniques. Prepare discussion points for each situation. Following are examples of such prepared situations:
    a. Overcoming Objections
        1) *Instructions to "Customer"*
        Bring a pair of expensive and relatively new wool slacks, on which you have spilled coffee containing milk and sugar, into a drycleaning establishment that advertises one day service. Do not call the stains to the salesperson's attention but ask to have the slacks cleaned by tomorrow, as you are going away for a few days and want to take them with you. If the salesperson convinces you that in order to remove the stains properly and clean the garment effectively it will take 3 days, object but eventually leave the slacks for cleaning. Do not leave them unless you are really convinced.
        2) *Instructions to Students Observing*
        Notice the way the salesperson meets customer's objections. Is it effective? Does she/he use selling points?
        3) *Discussion Points*
            a) What are customer's reactions to the longer time?
            b) Were customer's objections an indication that he/she was not going to leave the slacks for cleaning?
            c) How can objections be overcome?
    b. Trading Up Selling Situation
        1) *Instructions to Customer*
        Bring in a raincoat for drycleaning. If the salesperson suggests a water-repellent finish, show some interest in it but say it is more than you planned to spend. If the salesperson is not discouraged but tells you why the additional finish is a better buy, let her/him convince you and buy the suggested service.
        2) *Instructions to Students Observing*
        Notice how the salesperson uses facts and benefits to convince the customer that it's worthwhile to pay more.
        3) *Discussion Points*
        What are customer's reactions to higher priced services and suggestion selling?
    c. Argumentative Customer Situation
        1) *Instructions to customer*
        Bring in a garment for cleaning, and act the part of a customer who is always looking for an argument. Ask the price of cleaning and when the salesperson tells you, tell her/him

that their prices are always higher than other drycleaners. Ask when it will be ready and when the salesperson answers, tell her/him that the establishment never keeps their promises on delivery time quoted. If the salesperson is not discouraged, answers you courteously and overcomes your objections, leave the garment for cleaning. Otherwise, walk out with the garment.

2) *Instructions to students observing*
Notice the way in which the salesperson reacts to the customer's arguments. Is he/she too easily discouraged by them? Does he/she evidence patience and courtesy?

3) *Discussion Points*
Were the customer's argumentative reactions an indication of whether he/she would leave the garment for cleaning?

IV. SELLING IN INDUSTRIAL ESTABLISHMENTS

Teaching Content

A. Differences From Retail Selling
   1. Types of selling environments
      a. Firm headquarters
      b. Route salespeople
      c. Customer's office
   2. Types of industrial customers
      a. Institutions (e.g. hospitals, schools)
      b. Business firms (e.g. restaurants, airlines, hotels)
   3. Volume of sales
   4. Financial compensation
      a. Emphasis on commission
      b. Drawing accounts
      c. Opportunities for greater income
   5. Job responsibilities
      a. Locating outlets and customers
      b. Following up on customers
      c. Continual servicing of customers
      d. Advice to customers
      e. Following up on delivery of products and services sold
      f. Calling on customers
      g. Writing up customers orders

B. Essential Knowledge for Industrial Selling
   1. Company policies and procedures
      a. Distribution policies
      b. Terms of sale
      c. Return goods policies
      d. Delivery dates
      e. Shipping procedures
      f. Productive capacity
      g. Plant operations
   2. Product or service information
      a. Cost prices
      b. Construction of products (e.g. career apparel, linen rentals)
      c. Materials of products (e.g. career apparel, linen rentals)
      d. Competitive offerings
      e. Fashion information (e.g. styles)
      f. Style numbers of products
      g. Available colors and sizes
   3. Information about industrial customers
      a. Location of customers
      b. Types of services used by customers
      c. Customer's buying procedures and activities
      d. Names of buyers
      e. Potential buying volume of customers
      f. Rational nature of buying motives
      g. Special interests of customers
      h. Credit rating
      i. Sources of information about customers

C. Comparison to Retail Selling Techniques
   1. Approach
      a. Pre-approach: locating customers
      b. Appointments
      c. Importance of correct timing
   2. Selling presentation
      a. Emphasis on costs
      b. Emphasis on distinctive features of services
      c. Use of industrial customer "language"
      d. Emphasis on factual information
      e. Emphasis on reliability of services
      f. Guarantees (if any)
      g. Selling aids
   3. Closing the sale
      a. Special inducements to buy
      b. Limitations of supply, if valid
      c. Confirmation of order

D. Career Opportunities in Industrial Selling
   1. Scope of industrial opportunities in the community
   2. Advantages and limitations of industrial selling

Learning Experiences

1. Divide class into groups for a discussion and group report on what they, as potential industrial customers, would want to know about their suppliers, and their product and/or service offerings. Classify the information suggested by each group, and come to conclusions on the information expected from an industrial salesman.
2. Have students report on the similarities and differences in industrial and retail selling, and come to conclusions as to whether the "same person" can

be successful in both. Have students give reasons for their conclusions.

3. Have students, individually or in groups, select a "line" of rental services (e.g. career apparel, linen supplies, etc.), and identify the institutions or business establishments in the community that are potential customers.
4. Have students role-play selling situations between industrial sellers and industrial customers. Have class compare and discuss the similarities and differences between selling to industrial users and ultimate consumers.
5. Have students prepare a checklist of the sequential procedures they would follow in preparation for an industrial selling trip.

V. PREPARATION FOR PROFESSIONAL SELLING CAREERS

Teaching Content

A. Comparison of Job Function and Responsibilities
   1. Function
      a. Service to customers
      b. Sales representative of employer
   2. Examples of job responsibilities
      a. Counter salesperson
      b. Route salesperson
      c. Industrial salesperson

B. Self-Appraisal of Personal Qualifications
   a. Physical
   b. Emotional
   c. Social
   d. Interests

Learning Experiences

1. Assign some students to observe and analyze, for a given time period, the work activities of counter salespeople in drycleaning and/or laundering stores, and report their observations. Assign other students to research, either by actual observations, reference reading, and/or personal interviews, the work activities and responsibilities of route salesmen and industrial sellers. Have class categorize and compare the activities researched and reported.
2. Divide class into groups, and direct each group to make a list of the qualifications that they believe an effective salesperson needs. List qualifications on the blackboard and categorize according to physical, emotional, aptitude, and interest qualifications. Have students publicly or privately compare their own qualifications in order to increase their self-understanding, and evaluate their qualifications for selling as a professional career and/or as an entry job leading to career progression.

Suggested Evaluation

1. Students may be evaluated on evidence of their ability to describe a specific problem selling situation other than one that has been used in class, and the method in which it might be handled by a salesperson.
2. Have students role-play the part of a salesperson in one or more given situations, and evaluate their performance in regards to one or more of the following techniques:
   a. The appropriateness of their approach
   b. The method that they use to determine what their customer wants or needs
   c. Evidence of their ability to "tell the facts and sell the benefits"
   d. The techniques that they use to handle a complaint or overcome an objection and close the sale.
3. Evaluate students on evidence of their ability to develop a list of two or more effective selling sentences for each of the following selling procedures:
   a. Two different types of possible approaches
   b. Questioning customers about their wants or needs
   c. Relating a service fact to a customer benefit
   d. Suggestion selling

Teaching Resources

TEXTS AND REFERENCES

Haas, K. and J. Ernst. *Creative Salesmanship*
Kirkpatrick, C. *Salesmanship*
Reid, A. *Modern Applied Salesmanship*
Robinson, O., C. Robinson, and G. Zeiss. *Successful Retail Salesmanship*
Russell, F., F. Beach and R. Buskirk. *Textbook of Salesmanship*
Wingate, J. and C. Nolan. *Fundamentals of Selling*

PERIODICALS

Daily News Record
Women's Wear Daily

INSTRUCTIONAL SUPPLIES

- Sales training manuals (available without cost from National Cash Register Co., Dayton, Ohio)
- Sales training aids available for loan from local retail or industrial sellers (may include film strips, slide presentations, selling programs and the like)

Career Advancement Instruction

LEATHERS AND SUEDE

Prerequisites: *Spotting/Drycleaning I; Finishing*

Suggested Hours: *26*

Behavioral Objectives

This area of study should enable students to:

1. Distinguish between different types of leathers and identify their properties.
2. Test, pre-spot, and dryclean leather apparel and accessory products.
3. Utilize correct finishing techniques and equipment to finish leather garments in an economical span of time.
4. Use correct techniques and equipment to dye leather garments.
5. Analyze causes of leather damage and be able to do minor repairs.

Instructional Guidelines

This area of study is concerned with the more complex problems involved in the drycleaning and finishing techniques for leather and suede garments and accessories.

The problems of correct dyeing, redyeing, and finishing of leathers should be explored in classroom discussions. However, major emphasis and time should be given to learning experiences in the laboratory in order to develop the students' leather-cleaning skills.

Teaching Modules

	Suggested Hours	
	Class	*Laboratory*
I. Identification and Classification	2	—
II. Pre-spotting and Drycleaning	2	4
III. Finishing Leathers	2	4
IV. Dyeing Leathers	3	5
V. Leather Problems and Repair	2	2
Total Hours – – – –	11	15

I. IDENTIFICATION AND CLASSIFICATION

Teaching Content

A. Types of Leathers
   1. Top grain
   2. Splits (embossed)
   3. Suede

B. Properties of Leather

C. Tanning Processes

D. Advantages and Shortcomings of Leather

E. Care of Leather
   1. Top grain and splits
   2. Suede

F. Leather Imitations
   1. Vinyl
   2. Polyurethane
   3. Other plastic variations

G. Equipment Used
   1. Cleaning
   2. Dyeing
   3. Finishing

Learning Experiences

Have the students identify and analyze actual chips of leather as follows:

1. Real leather or imitation
2. Top grain or split
3. Type of tanning process used
4. Required care when used in a product
5. One suggested end-use for leather
6. Properties of leather that best lend themselves to that use
7. Shortcomings and advantages of leather for the suggested end-use

II. PRE-SPOTTING AND DRYCLEANING

Teaching Content

A. Tests for Color Bleeding

B. Pre-spotting and Soaking

C. Drycleaning Grain and Suede Leathers
   1. Use of correct solvent
   2. Correct cleaning procedure
   3. Drycleaning gloves

D. Hand-cleaning Handbags

E. Drying
   1. Tumble
   2. Air

Learning Experiences

1. Have students check different colors of leather chips for color bleeding and explain why this color might bleed.
2. Have students pre-spot a leather swatch or garment.
3. Have students hand-clean a handbag.
4. Have students prepare and dryclean a swatch of (a) grain leather and (b) split grain embossed leather.
5. Have students demonstrate correct drying technique for swatches and/or leather garments and/or accessories.

III. FINISHING LEATHERS

Teaching Content

A. Grain Leathers: Hot Head Press

B. Suede Leathers
   1. Hot head press
   2. Grid-head press

C. Gloves: Glove Iron

Learning Experiences

Have students actually finish:

1. Top grain or embossed leather garments or swatches
2. Suede leather garments or swatches
3. Grain or suede gloves

IV. DYEING LEATHERS

Teaching Points

A. Dyeing Techniques and Quality Factors
   1. Drum dyeing
   2. Brush dyeing
   3. Spray dyeing and mixing colors

B. Dyeing Procedures
   1. Grain and/or suede garments
   2. Grain and/or suede gloves and handbags

Learning Experiences

1. Have students prepare colors and dye leather swatches and/or garments using the following techniques:
   a. Drum
   b. Brush
   c. Spray
2. Have students explain why they selected that type of dyeing technique for a specific end use.

V. LEATHER PROBLEMS AND REPAIR

Teaching Content

A. Causes of Leather Problems
   1. Discoloration due to wear
   2. Drying and crocking
   3. Alterations for leather
   4. Leather dusting

B. Repair of Leathers
   1. Torn skins
   2. Redyeing to match existing skins
   3. Sewing leather

Learning Experiences

Give students leather swatches or garments with different types of problems on them and have them identify the problem and then try to resolve it.

Suggested Evaluation

Given four leather "stained" samples (garments, accessories or swatches), students may be evaluated on their ability to:

1. Identify the type of leather, the coloring technique, and the tanning process.
2. Efficiently clean the four samples within a given time.
3. Dye one of the leather samples using the correct techniques and methods.
4. Utilize the correct equipment to properly finish one or more of the leather samples.

Teaching Resources

AUDIOVISUAL AIDS

Sam Suede, Highlander Eye. 15 min. color filmstrip, sound Highland Sportswear, 1407 Broadway, New York, N.Y. 10018

INSTRUCTIONAL SUPPLIES

- Leather swatches (chips)
- Leather garments and accessories
- Leather information brochures (available free from Tanners Council, 411 Fifth Ave., New York, N.Y. 10016 and from Leather Industries of America, 411 Fifth Ave., New York, N.Y. 10016)

PLANT MAINTENANCE

Prerequisites: *Finishing: Spotting/Drycleaning I;* and/or *Laundering*

Suggested Hours: 26

Behavioral Objectives

This area of instruction should enable students to:

1. Demonstrate the proper care of cleaning and finishing equipment on a preventative basis.
2. Analyze a given situation and decide if simple repairs can be done in the plant, or if "outside" equipment servicemen should be called.
3. Comprehend and explain the basic principles of electricity, steam, and plumbing.
4. Select the correct boilers, air compressors, and vacuum for the right facility, and recognize safety factors relating to each type of equipment.

Instructional Guidelines

This area of instruction deals with the proper care and repair of equipment used in drycleaning and laundering. It includes an introduction to boilers and a study of how to maintain and repair them. Electricity is also covered from the point of view of simple repairs.

It is suggested that emphasis be placed on the type of boilers used in the local area. It is further suggested that safety factors should be constantly stressed and enforced.

Teaching Modules

	Suggested Hours	
	Class	*Laboratory*
I. Proper Care of Equipment	2	2
II. Simple Repairs	2	4
III. Electricity, Steam, Plumbing	2	6
IV. Boilers	2	6
Total Hours – – – –	8	18

I. PROPER CARE OF EQUIPMENT

Teaching Content

A. Preventative Maintenance
   1. Oiling
   2. Greasing

B. Importance of Scheduling
   1. Weekly
   2. Monthly
   3. Quarterly

Learning Experiences

Assign different students to different pieces of equipment and have them make up a preventative maintenance program with correct scheduling, based on the manufacturers' equipment manuals available for student use.

II. SIMPLE REPAIRS

Teaching Content

A. Changing Traps

B. Replacing Belts

Learning Experiences

1. Have students examine traps and determine if and why they require changing.
2. Have students examine the belts on various machines and determine if and why they require replacement.

III. ELECTRICITY, STEAM, PLUMBING

Teaching Content

A. Location of Electrical Problems
   1. Basic principles
   2. Symbols in circuit

B. Steam Usage
   1. Generators
   2. Pressure

C. Plumbing
   1. Basic principles
   2. Reduction in steam pressure

3. Insulation of steam lines
4. Determination of water pipe diameter

Learning Experiences

Pre-arrange "problems" for students to analyze. Have students evaluate the problems to decide whether they would perform the repairs themselves or call in an "outside" serviceman. Ask students to justify their decisions.

IV. BOILERS

Teaching Content

A. Types of Boilers, Air Compressors, Vacuums
   1. Advantages and limitations of each
   2. Rating
   3. Classification of boilers

B. Selection of Proper Boiler

C. Care of Boiler

D. Safety Regulations for Boilers

Learning Experiences

Prepare and present to the students hypothetical case problems that relate to the selection of a boiler for a specific plant operation. Have students "select" a boiler and explain their selection of a particular boiler in terms of advantages and limitations, and care and safety factors.

Suggested Evaluation

Students may be evaluated on evidence of their ability to:

1. Demonstrate the correct care for laundering, drycleaning, and finishing equipment.
2. Relate care and maintenance factors to:
   a. Sales volume of the business
   b. Number of equipment units in the plant
   c. Age of the units
   d. Use of "outside" servicemen
3. Demonstrate their knowledge of electricity, steam, and plumbing by repairing a non-operational piece of equipment, within a given time.
4. Select the correct pieces of equipment for a given plant, from a choice of 6 boiler air compressors and vacuums, and explain:
   a. Safety regulations for each piece of equipment
   b. The number of units needed
   c. The type of business operation for which they are appropriate

Teaching Resources

TEXTS AND REFERENCES

Pocketbook for the Drycleaner

INSTRUCTIONAL SUPPLIES

- Cutaway drawings of boilers
- Manufacturers equipment manuals for equipment in the school laboratory and other equipment in general use
- Overlay transparencies of boiler, compressor, electrical circuitry, and plumbing equipment
- Actual models of equipment with cutaways including gate valves and joints

INDUSTRY WORKSHOP

Prerequisites: *Basic Textiles; Spotting/Drycleaning I; Finishing*

Suggested Hours: 30

Behavioral Objectives

This area of study should enable students to:

1. Be familiar with possible places of drycleaning and/or laundering employment, and the competencies expected by employers.
2. Distinguish between different types of drycleaning and laundering establishments, and understand the differences or similarities of their operations.
3. Understand industry practices and standards.
4. Be familiar with new developments in drycleaning and/or laundering chemicals and equipment.
5. Understand the function and activities of drycleaning and/or laundering trade associations.

Instructional Guidelines

This area of study is designed to familiarize students, by means of on-site visitations and industry resource people, with the many different types of establishments and industry operations within the drycleaning and laundering field. By such direct and varied exposure, students will be able to observe industry practices, standards, and procedures, evaluate possible employment alternatives, career opportunities, and desired competencies, and become familiar with suppliers and new developments and trends in chemicals and equipment.

It is suggested that the instructor prepare the students in advance of each visitation and guest lecture by defining its specific purpose and directing the students attention to points for observation. Class discussions should be held following each visitation, to compare notes and come to conclusions on what they have seen and/or heard. It is further suggested that the instructor supplement any necessary informational area that students may have overlooked.

Although only one visit or guest lecture is included for each module, these should be expanded as time and community resources permit.

Teaching Modules

		Suggested Hours	
		Class	*Laboratory*
I.	Orientation	1	
II.	Drycleaning Plants	1	4
III.	Laundry Plants	1	4
IV.	Rental Operations	1	3
V.	Franchises	1	3
VI.	Chemical Suppliers	1	3
VII.	Equipment Suppliers	1	3
VIII.	Trade Associations	1	2
	Total Hours — — — —	8	22

I. ORIENTATION

Teaching Content

A. Instructional Purpose and Scope
   1. "Window" on the industry
      a. Employment opportunities
      b. Desired competencies
      c. Industry standards
      d. Industry scope
      e. Practices and procedures
      f. Current trends and developments
   2. Utilization of communication skills
      a. Public speaking
      b. Reading comprehension
      c. Report writing

B. Overview of Learning Experiences
   1. Industry exposure
      a. Field visits
      b. Resource persons
   2. Types of exposure
      a. Drycleaning plants
      b. Laundering plants
      c. Rental operations
      d. Franchises
      e. Chemical suppliers
      f. Equipment suppliers
      g. Trade associations

Learning Experiences

After teacher has fully explained the reason and scope of this area of instruction:

1. Have the students suggest the order in which they would like to visit industry plants and why they would like to see them in this order.
2. Have the students suggest the order in which they would like to have resource persons and why they would like them in that order.

II. DRYCLEANING PLANTS

Teaching Content

A. Retail Plants
   1. Small neighborhood establishments
   2. Large volume establishments

B. Industrial Plants
   1. Uniforms
   2. Restorations: after fire
   3. Carpets and rugs

Learning Experiences

1. Invite resource person from a drycleaning plant to talk to class about plant size, layout, equipment, sales volume, work flow, and quality control in general and as applied to his/her specific operation in particular.
2. Plan a field trip to either a retail or industrial drycleaning facility and ask a supervisor to discuss its customers, approximate production in pounds or units delivered, equipment used, work flow, types of personnel, and quality control standards.
3. After both guest lectures and plant visitation, have students write a detailed report on either one about the information learned with regard to:
   a. Plant size
   b. Volume of production
   c. Layout of plant
   d. Work flow due to equipment position
   e. Quality control standards
   f. Any suggestions for hypothetical changes they would make

III. LAUNDRY PLANTS

Teaching Content

A. Commercial or Family Launderies
   1. Small neighborhood establishments
   2. Large volume plants
      a. Store pick-up
      b. Route sales

B. Industrial Laundries
   1. Institutional
      a. Hospitals
      b. Hotels
      c. Colleges
   2. Private
      a. Uniforms
      b. Restaurant linens
      c. Restorations

Learning Experiences

1. Have a resource person from a local laundering plant talk with the class about laundering plant sizes, layouts, equipment used, sales volume, work flow, and quality control in general, and his/her specific operation in relation to the same areas.
2. Plan a field trip to either a family service or industrial laundering facility for a tour and discussion of plant services, approximate production in pounds or units delivered, equipment used, work flow, type of personnel, and quality control standards used.

IV. RENTAL OPERATIONS

Teaching Content

A. Types of Rentals
   1. Linen suppliers
      a. Table linens
      b. Bed linens
   2. Career apparel suppliers
      a. Uniforms
      b. Smocks
      c. Jackets
      d. Others

B. Types of Rental Customers
   1. Institutions
      a. Hospitals
      b. Restaurants
      c. Schools
      d. Hotels
      e. Caterers
   2. Families and individuals

C. Types of Rental Suppliers
   1. Drycleaners
   2. Launderers
   3. Franchises

D. Considerations in Rental Operations
   1. Sale of rentals
   2. Life of article
   3. Deliveries expected
   4. Replacement of worn or damaged articles
   5. Properly balanced cost-profit ratios
   6. Franchisers

Learning Experiences

1. Have a resource person from a rental operation talk in general with the class about storage of articles prior to sale, selling rental articles, delivery and damage problems, profit potential, and franchises in the field.
2. Plan a field visit to a rental operation for a tour and discussion of plant operations pertaining to storage facilities, flow of work, packaging devices, delivery procedures, quality control standards, rental sales, and franchised procedures, if any.

V. FRANCHISES

Teaching Content

A. Nature of Franchising
   1. Explanation of franchising
   2. Franchisers and franchisees

B. Types of Franchises
   1. Equipment
   2. Chemicals
   3. Rental linens and apparel

C. Advantages for Franchisees
   1. Expertise of franchiser
   2. Ease of entry
   3. Advertising benefits

D. Disadvantages for Franchisees
   1. Excessive control by franchiser
   2. Cost of franchise

Learning Experiences

1. Invite a franchisee as a resource person to talk to the class about different types of franchises, problems of franchisees, advantages of a franchised operation, and franchiser-franchisee relationships.
2. Invite a resource person of a franchise organization to talk to the class about franchising operations from the franchiser's viewpoint.
3. Have students write a report that covers types of franchises, advantages and disadvantages, and the problems that arise, and evaluate franchised operations based on the information they have been given by the two resource people.

VI. CHEMICAL SUPPLIERS

Teaching Content

A. Review of Basic Chemicals Used
   1. Laundering
      a. Detergents
      b. Sours (alkalies)
      c. Bleaches
      d. Brighteners
      e. Stain removers
   2. Drycleaning
      a. Detergents
      b. Solvents
      c. Brighteners
      d. Stain removers

B. New Developments in Chemicals and Testing
   1. Drycleaning
   2. Laundering

Learning Experiences

1. Have at least one resource person of a chemical supplier to talk to the class about the necessity of quality chemicals for good cleaning, new market developments in chemicals, tips and valid short cuts in the use of chemicals, new chemical testing techniques, and the need for accurate costing of chemicals.
2. Have students write a report, based on class and resource person's discussion, that covers:
   a. Existing chemicals currently used
   b. New chemical developments
   c. New tests with chemicals
   d. The need for proper costing of chemicals
   e. Chemical supplier's point of view

VII. EQUIPMENT SUPPLIERS

Teaching Content

A. Review of Basic Equipment
   1. Laundering
      a. Washers
      b. Washer-extractors
      c. Manglers
      d. Extractors
      e. Finishing tunnels
   2. Drycleaning
      a. Washers
      b. Extractors
      c. Filters
      d. Stills
      e. Finishing presses
      f. Steam-air equipment

B. New Equipment Developments
   1. Laundering
   2. Drycleaning

C. Use of New Equipment versus Old Equipment
   1. Advantages
   2. Disadvantages

Learning Experiences

1. Have at least one resource person of an equipment supplier talk with the class about the proper use and care of equipment presently in use, new equipment developments, tips and short cuts to make existing equipment work better, new testing equipment, and the advisability of getting new equipment versus keeping old equipment.
2. Have students write a report, based on resource person and class discussion, that summarizes:
   a. Common types of current equipment
   b. New development in equipment
   c. Ways and means to improve the performance of equipment currently in use
   d. An equipment supplier's viewpoint of drycleaning and/or laundering

VIII. TRADE ASSOCIATIONS

Teaching Content

A. Types
   1. Local
   2. Regional
   3. National
   4. International

B. Function of Trade Associations
   1. Favorable government legislation (lobbying)
   2. Educational services
      a. Publications
      b. Training clinics
   3. Exchange of information
   4. Industry public relations
   5. Other services to members
      a. Business management
      b. Cleaning or laundering problems
      c. Sales promotion activities

C. Economics of Trade Associations
   1. Member fees
   2. Publications
   3. Seminars and clinics

Learning Experiences

1. Invite a resource person of a drycleaning and/or laundry trade association to give a guest lecture to class about the function, goals, and services of trade associations in general, and his/her association in particular.
2. Have students evaluate the necessity and importance of trade associations in terms of their costs to members and the services they render.

Suggested Evaluation

1. Students may be evaluated on evidence of their ability to describe the similarities and differences for a specified number of different types of drycleaning and/or laundering enterprises.
2. Evaluation may be based on evidence of the students' ability to set-up two simulated and different types of drycleaning and/or laundering enterprises of their choice, and contrast the nature, organization, and operational characteristics of their enterprises.

Teaching Resources

PERIODICALS

American Drycleaner
American Laundry Digest
Coin-Op
Drycleaner News
Drycleaning World
Textile Maintenance Reporter

INSTRUCTIONAL SUPPLIES

- Pamphlets and brochures from suppliers of equipment and chemicals
- Photostatic copies of pertinent articles from trade periodicals for student distribution

PLANT MANAGEMENT

Prerequisites: *Spotting Drycleaning II; Plant Maintenance*

Suggested Hours: 32

Behavioral Objectives

This area of study should enable students to:

1. Set up a physical plant layout that includes optimum placement of equipment to minimize problems relating to safety and to maximize production of properly cleaned and finished garments.
2. Plan and execute a productive work flow for garments to be cleaned, finished, stored, and ready for customer delivery.
3. Establish realistic and workable quality control standards that result in quickly and efficiently cleaned garments that are properly identified and recorded.
4. Select the correct and feasible types of packaging and forms that would result in a professional-looking drycleaned or laundered garment.
5. Understand marketing strategies and approaches for drycleaning and laundering operations.
6. Be familiar with personnel problems and practices.

Instructional Guidelines

This area of study is designed to give students an insight into procedures and problems involved in the operation and management of a drycleaning and/or laundering establishment. Teaching content covers plant layout, work flow, quality control, marketing techniques, and personnel procedures.

It is suggested that, wherever appropriate, students be encouraged to apply the knowledge acquired in previous drycleaning and laundering studies. It is further recommended that plant safety factors should be continually called to the students' attention.

Teaching Modules

		Suggested Hours	
		Class	*Laboratory*
I.	Plant Layout	2	2
II.	Flow of Work	3	3
III.	Quality Control Standards	3	1
IV.	Packaging and Production Standards	3	1
V.	Marketing	4	2
VI.	Personnel Practices	3	5
	Total Hours ----	18	14

I. PLANT LAYOUT

Teaching Content

A. Space Factors
   1. Location
      a. Space and shape
      b. Percentage of gross sales: 10% or less
   2. Existing space
   3. Building to specification
   4. Importance of high ceilings
   5. Ventilation
   6. Basement areas

B. Types of Work Flow
   1. Most efficient
      a. "U" shaped
      b. Circular
   2. Cost saving of straight line

Learning Experiences

Present to students one or more hypothetical case problem(s) relating to store and/or space selection, and have them devise a store or plant layout that shows type of work flow, equipment positioning, storage facilities, and the like.

II. FLOW OF WORK

Teaching Content

A. Receipt of Items
   1. Importance of customer service attitudes
   2. Recognition of problem work and stains
   3. Marking procedures

B. Identification Systems and Evaluation
   1. Daily delivery tags (DDS)
      a. Clarity of handwriting
      b. Dangers of clipping
   2. Day lot
      a. Color codes
      b. Stapling advantages
   3. Controlled lot
      a. Efficiency
      b. Costs

C. Separation of Different Services
   1. Belts
   2. Fragile items

D. Cleaning Operations
   1. Classification of work by operator
   2. Pre-spotting
   3. Cleaning and drying

E. Examination of Cleaned Work

F. Finishing
   1. Steam-air equipment
   2. "Through-the-unit" finishing
   3. Assembly area
   4. Examination prior to assembly

G. Bagging and/or Packaging
   1. Customer service representative
   2. Examination prior to bagging
      a. Pressing
      b. Stains
      c. Missing buttons

Learning Experiences

Have students set up a flow of work for a hypothetical store or plant and produce a flow chart.

III. QUALITY CONTROL STANDARDS

Teaching Content

A. Analysis of Operations Techniques

B. Establishment of Quality Control Standards
   1. Based on established techniques
   2. Based on new techniques needed
      a. Amount of supplies needed for cleaning
      b. Problems of soil redeposition
      c. Cleaning of questionable garments

C. Cost Comparisons and Returns on Investments
   1. Package plant
   2. Bulk plant
   3. Commercial plant including linen supply
   4. Industrial cleaning plant

Learning Experiences

Have students set up an analysis of any plant discussed in class that includes all the factors covered, including cost comparisons and returns on investments.

IV. PACKAGING AND PRODUCTION STANDARDS

Teaching Content

A. Production Standards and Records
   1. Wage incentives
   2. Plant operations with lot systems
   3. Drycleaning/spotting
   4. Finishing

B. Importance of Proper Records
   1. Amount of supplies used
   2. Cost of supplies
   3. Cost of cleaning
   4. Cost of finishing

C. Packaging
   1. Types used
   2. Cost of each
   3. Advantages of proper packaging
      a. Advertising messages
      b. Customer service
      c. Enhancement of garment

Learning Experiences

1. Have students devise a set of production standards for any type of plant justifying their ideas for production procedures.
2. Have students devise a set of records for a plant and justify the need to keep proper records.
3. Have students decide on whether or not to use different types of packaging devices and explain their decision.

VI. MARKETING

Teaching Content

A. The Marketing Approach
   1. Planning market strategy
   2. Market research

B. Analysis of the Drycleaning and Laundering Product
   1. Professionally cleaned and finished products
   2. Customer services

C. Pricing Considerations
   1. Competition
   2. Geographic location
   3. Consumer socio-economics
   4. Profit

D. Sales Promotion and Personal Selling
   1. Packaging devices
   2. Advertising
   3. Public relations and publicity
   4. Personal selling

Learning Experiences

Have student groups plan a marketing campaign for a simulated drycleaning and/or laundering establishment in a specific neighborhood of their selection.

VII PERSONNEL PRACTICES

Teaching Content

A. Employment Procedures
   1. Recruitment of personnel
   2. Hiring
   3. Training
      a. Supervisory employees
      b. Part-time employees
      c. Regulations

B. Human Relations
   1. Job relations
   2. Motivational factors

C. Safety Factors
   1. Equipment
   2. Personal

D. Salespeople
   1. Motivating salespeople
   2. Developing a salestraining program
      a. Sales training
      b. The sales training manual
      c. Developing company loyalty

E. Personnel Problems
   1. Absenteeism
   2. Attitude
   3. Appearance
   4. Safety precautions
   5. Others

Learning Experiences

1. Have students role-play personnel interviews that illustrate personnel problems such as absenteeism, appearance, attitude, safety, etc.
2. Have students try to teach a laundering or drycleaning skill to the rest of the class as if the class were co-workers. Have students, acting as supervisors, repeat the lesson.
3. Have students develop and discuss a sales training manual for distribution to over-the-counter salespeople and route-salespeople.

Suggested Evaluation

1. Have students set up a complete physical plant layout for a given plant facility (real or hypothetical) and evaluate for evidence of:
   a. Optimum placement of equipment
   b. Safety factors and regulations
   c. Productivity of work flow
   d. Adequacy of storage facilities for finished items items
   e. Realistic quality control standards
2. Evaluate students on their ability to set-up a record system for a given facility and justify the need to keep records.
3. Have students develop a marketing campaign to bring a company name and services to the attention of their community. Evaluate for evidence of their understanding of the marketing function, advertising techniques, and involvement in community activities.
4. Evaluate the students ability to set up a "mini" training program that demonstrates their understanding of the importance of safety factors and the prevention of potential personnel problems.

Teaching Resources

TEXTS AND REFERENCES

First Armour Research Report on Laundry Distribution Practices
Pollatsek, F., W. Seitz, and R. Finkel. *Drycleaner's Guide*
Riggott, C. J. and Bauman. *Finishing Quality and Methods*
Second Armour Research Report on Laundry Distribution Practices
Serve, Sell, Succeed at the Counter

AUDIOVISUAL AIDS

The Professional Drycleaning Story, 17 min., color filmstrip, sound
International Fabricare Institute, Joliet, Ill. 60431

INSTRUCTIONAL SUPPLIES

- Advertisements by drycleaning and laundering establishments
- Samples of record forms and identification forms used in drycleaning and laundering establishments
- Slides and photographs of interiors of drycleaning and laundering establishments

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FACILITIES, EQUIPMENT AND COSTS, SUPPLIES

FACILITIES

Laboratories and related classrooms, as well as storage facilities required for a drycleaning and/or laundering program, do not present special or unusual conditions peculiar to the technology. Any well-constructed building with suitable utilities may be used. All facilities, of course, must be in accordance with local, State and city safety codes.

If possible, the laboratory should be in a building where the floor can support heavy equipment. The ground floor might be advisable, though not necessary. A classroom near the laboratory is desirable. Classrooms and laboratories should be well lighted.

Hot and cold water, and compressed air and steam service lines to the laboratories, should be planned for the shortest length of piping consistent with laboratory arrangement. They should be hidden as far as practical, but control points should be planned for safety, accessibility, and ease of maintenance. It is recommended that each type of equipment in the laboratories, such as spotting boards, drycleaning machines, washers, and finishing equipment, have a separate master control panel with shut off valves for each. This master control should be locked when not in use. Because of the use of steam, a boiler of at least 30 h.p. should be located in or near the laboratory proper.

Electrical services should provide both 110 and 220 volt electrical service for these laboratories. In connecting electrical service in the laboratory, it is suggested that circuit breakers be utilized with ample capacity so that when a number of students are using electrical apparatus, the lines will not become overloaded. A master distribution control panel should be installed.

The layouts that are included are suggested as examples of satisfactory laboratories for drycleaning and laundering, including finishing. Each layout offers features that may assist in the design of a laboratory to satisfy the needs of a particular school's program. It should be noted that the layouts do not illustrate placement of wiring for electricity or pipes for plumbing. It is suggested that when the equipment is purchased, the cost should include correct installation.

It is estimated that a minimum of 750 square feet would be needed for the drycleaning equipment (approximately 25' x 30'). The amount of space needed for finishing (pressing) equipment is 30' x 40' or 1200 square feet. The laundering equipment needs at least 600 square feet (approximately 20' x 30'). This will give the total of 2550 square feet.

EQUIPMENT AND APPROXIMATE COSTS

Following is a listing of drycleaning and laundering equipment that is suggested for a class of 20 to 25 students. Approximate costs, as of the time of this publication, are also included. The equipment listed is basic and does not include many of the more sophisticated pieces of equipment that are also in use in the drycleaning and laundering field. The amount of equipment which the school would include in the drycleaning, finishing, and laundry laboratories would depend upon the availability of cooperative training opportunities in the community for the students. The greater the cooperation between the dry cleaning and laundry industry and the school, the more opportunities will be available for cooperative training stations. A list of suppliers is available from (1) *Drycleaning World,* 200 Madison Avenue, New York, N.Y. 10016, and (2) *Coin-Op, 1972 Fact Finder Buying Guide,* 200 Madison Ave., New York. N.Y. 10016.

All installations must conform to the Federal Government's *Occupational Safety and Health Act* and meet the required safety laws of the area in which the school is located.

	DRYCLEANING EQUIPMENT	*APPROXIMATE TOTAL COST*
1	Washer-extractor and reclaiming unit including filter and still-20 lb. unit Perchlorethylene type	$ 9,800.00
18	Steam Spotting Boards @ $500 ea.	9,000.00
8	Utility Presses @ $1800 ea.	14,400.00
3	Topper-Leggers @ $4,000 ea.	12,000.00
1	All purpose press with iron	1,925.00
9	Puff irons (7 single and 2 three position) @ $140 ea.	3,690.00

DRYCLEANING EQUIPMENT (Continued)		
8	Steam-Air Formers (Coats & Suits) @ $727 ea.	5,816.00
1	Ironing board and Steam iron	296.00
1	Scale for weighing loads	80.00
1	Medium size clothes hamper	40.00
13	Hand irons @ $75 ea.	975.00
1	Drapery folder	1,100.00
31	Water spray guns (18 spotting and 13 pressing) @ $15 ea.	465.00
Slick rails @ $4 per foot installed		———
1	30 H.P. Boiler and return system, blow down tank (if high pressure steam is not available in facility)	3,000.00
1	Air compressor, 7½ H.P.	650.00
1	Vacuum	450.00
1	Steam cabinet	1,200.00
1	Solvent odor absorber (sniffer)	1,700.00

FINISHING EQUIPMENT	*APPROXIMATE TOTAL COST*[1]
1 Two-girl shirt unit	$2000 - $5000
1 Damp box assemble	2000 - 5000
1 Cabinet bag sleever	2000 - 5000
1 Cabinet body press	2000 - 5000
1 Front folding table	2000 - 5000

LAUNDERING EQUIPMENT	*APPROXIMATE TOTAL COST*
1 Washer - 25 lb.	$2000
1 Extractor - 20 lb.	2500
1 Washer-Extractor - 30 lb.	4000
1 Tumbler - 36" x 30"	1500
1 Water Tank Storage (200 gallons with Gas Heater)	3000

[1] The costs listed for finishing equipment are for used equipment in good condition.

SUPPLIES

Following is a list of drycleaning and laundering supplies and an approximation of the quantities that should be sufficient for one school year for a class of 20 to 25 students.[2] Approximate costs for the drycleaning and finishing supplies are $3000; approximate costs for the laundering supplies are $1000.

[2] Drycleaning and Finishing supplies and quantities courtesy of Millard J. Price, Instructor, Board of Cooperative Educational Services, Third Supervisory District, Suffolk County, N.Y.; Laundering supplies and quantities courtesy of Kenneth Faig, International Fabricare Institute, Joliet, Illinois.

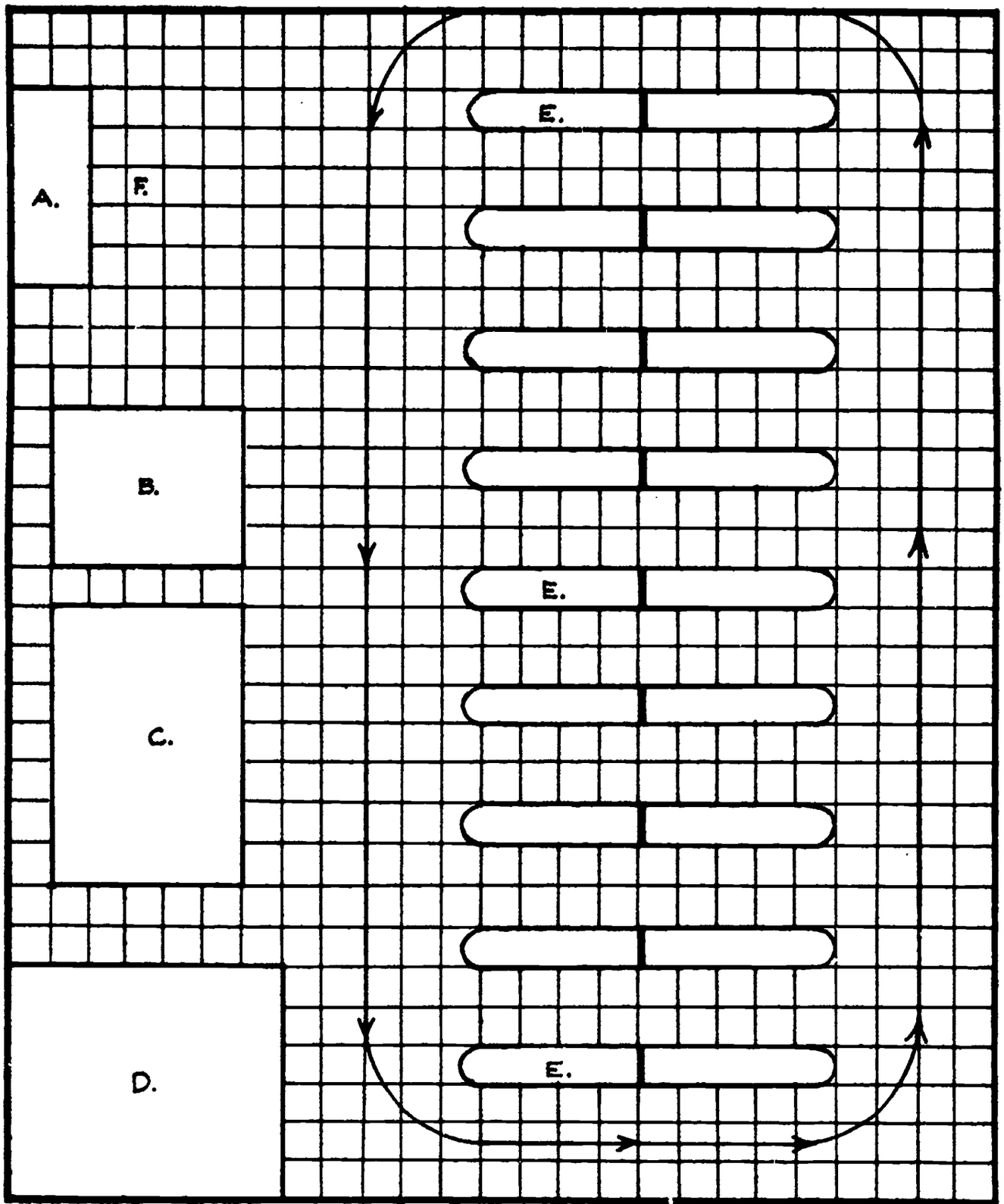
A list of suppliers is available from the sources identified in the Equipment section above.

DRYCLEANING SUPPLIES	*APPROXIMATE QUANTITIES*
Oil paint and grease remover	20 gallons
Protein formula	5 gallons
Tannin stain remover	5 gallons
Amyl acetate	5 gallons
Volatile dry solvent	5 gallons
Pre-spot	10 gallons
Neutral synthetic detergent	20 gallons
Digester	10 lb.
Rust remover	36 bottles
Optical brightener	1 gallon
Odor remover	1 gallon
Filter powder	25 bags
Activated charcoal	100 bags
Perchlorethlyne	15-55 gallon drums
Nets	12
Sizing	5 gallons
Water repellent	5 gallons
Cheese cloth	5 boxes
Spatulas	50
Brushes (spotting)	2 per student
Board (1 dryside, 1 wetside)	40
Hangers	
Suit	5M
Cape	5M
Shirt	5M
Drapery	1 box
Saddles #13 and drapery	1 box each
Polyethylene bagging	
38"	10 rolls
50"	10 rolls
30"	10 rolls

FINISHING SUPPLIES	*APPROXIMATE QUANTITIES*
42-inch Pad	2 per unit
Pleater	2 per unit
Hand pad	2 per unit
Tie form	6
Sleevers	2 sets per steam-air finisher
Vent clamps	2 sets per steam-air finisher
Ironing board pads	2 per unit
Whisk brooms	2-12" per unit

FINISHING SUPPLIES (Continued)	
Special tags	
"Sorry" tickets	1 box
Tailoring tickets	1 box
Rush tickets	1 box
Waterproofing tickets	1 box
Banana hooks	6 boxes

LAUNDRY SUPPLIES	*APPROXIMATE QUANTITIES*
Tape (Thermoseal Marking Machine)	20 (2 sets 10 assorted)
Laundry nets	16 oz. ea.; red, white, olive
Laundry pins	2 dozen
Scale basket	1
Soap	300 lbs.
Bleach	50 lbs.
Anti-chlor	50 lbs.
Starch	150 lbs.
Sour	50 lbs.
Dye stain stripper	1 gallon
Bins	3 (8 Bushels)
	2 (12 Bushels)
Gloves (Neoprene)	2 pair
Pink tissue	As needed
Staple remover	2
Lint brush	2
Suede brush	1
Staple guns	4
Hanger ties ("twist-ems")	10 boxes
Piece tag system	8 place Liberty
Rail Whiz®	2 bottles
Invoice clips	2 dozen
Marking pens	2 boxes



SCALE: 1/4" = 1'

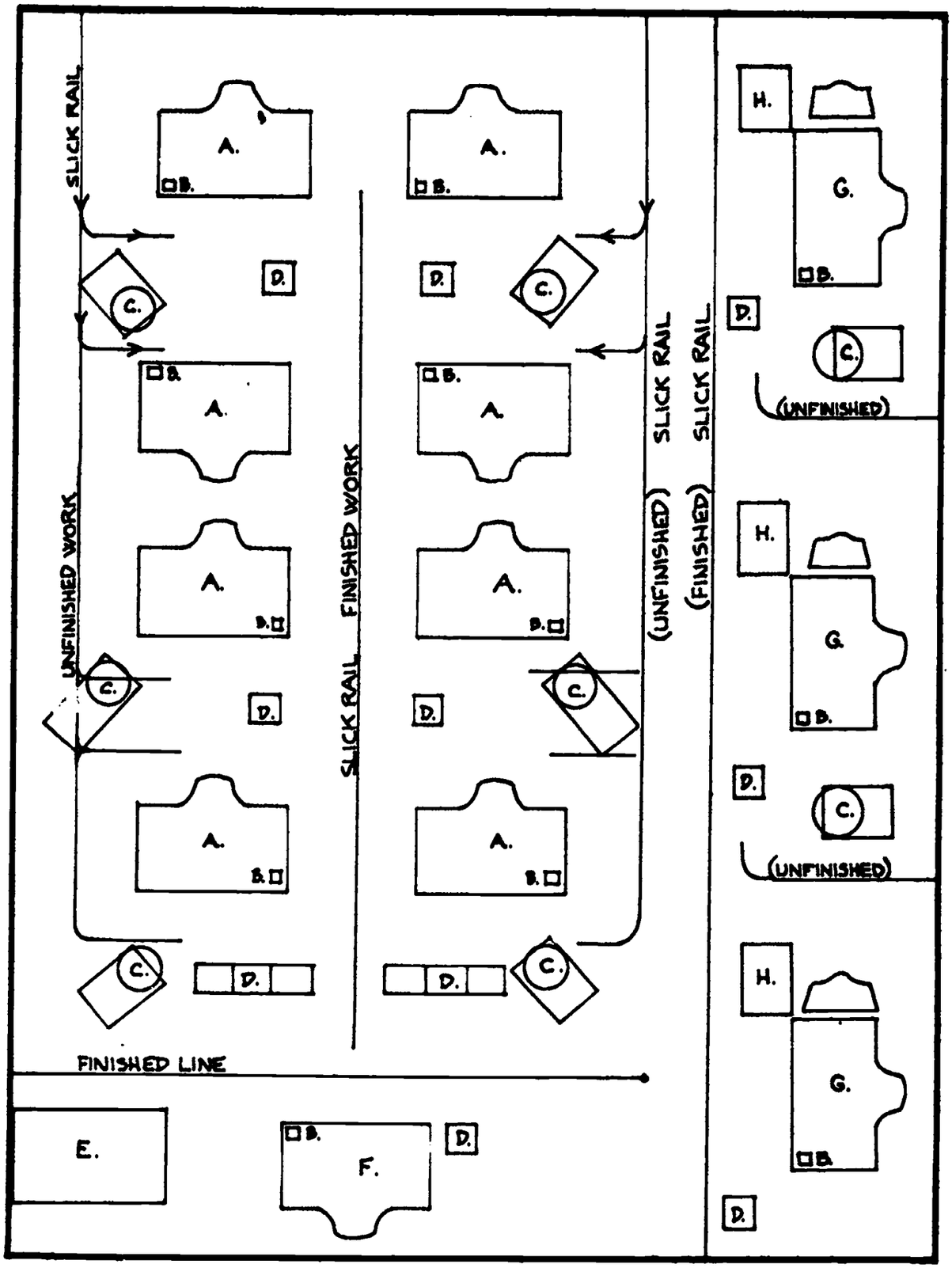
COURTESY - NEIGHBORHOOD CLEANERS ASSOCIATION
NEW YORK, NEW YORK ROSE FINKEL

LAYOUT LEGEND

A. SOLVENT ODOR ABSORBER (SNIFFER)
B. RECLAIMER.
C. WASHER, EXTRACTOR, FILTER & STILL
D.C. MACHINE.
D. SUPPLY ROOM.
E. SPOTTING BOARDS.
F. CLOTHES STORAGE AREA BASKETS.

Drycleaning and Spotting Laboratory

'71

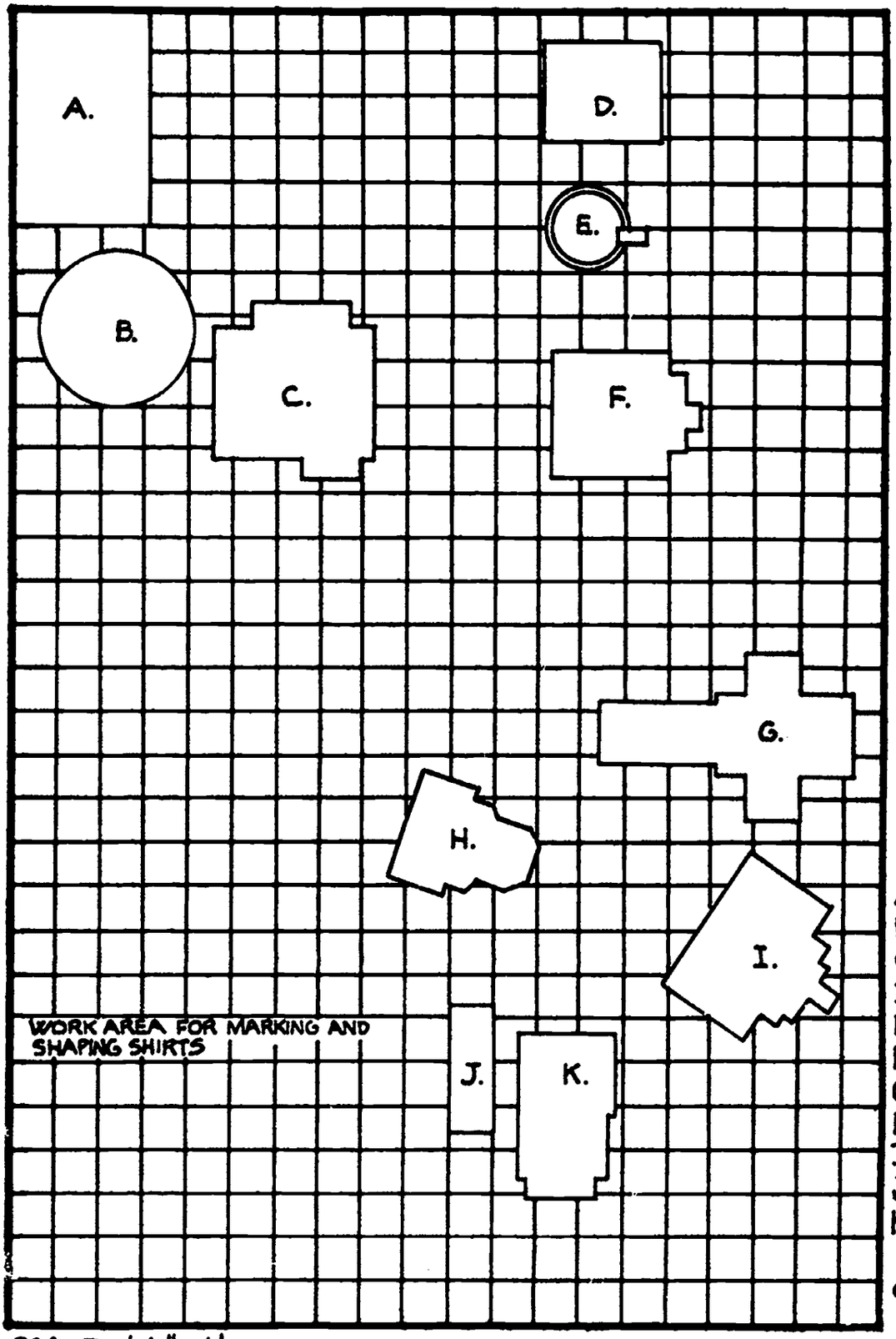


LAYOUT LEGEND

A. UTILITY PRESS
B. IRON
C. STEAM AIR FORMERS
D. PUFF IRONS
E. STEAM CABINET
F. DEMONSTRATION MACHINE
G. LEGGER
H. TOPPER

SCALE: 3/16" = 1'

Finishing Laboratory



LAYOUT LEGEND

A. WATER STORAGE TANK
B. GAS WATER HEATER
C. 30 LB. WASHER EXTRACTOR
D. 25 LB. WASHER
E. EXTRACTOR
F. 36" x 30" TUMBLER
G. DOUBLE SHIRT UNIT
H. FOLD
I. BODY PRESS
J. DAMP BOX
K. SLEEVER

COURTESY: KEN FAIG, INTERNATIONAL FABRICARE INSTITUTE

SCALE: 1/4" = 1'

Laundering Laboratory

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Kirkpatrick, Chas. *Salesmanship*. 5th ed. Cincinnati, South-Western Pub. Co., 1973.

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——— *Spotting Primer*. Joliet, Ill., International Fabricare Institute, 1970.

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Wingate, John, and Carroll Nolan. *Fundamentals of Selling*. 9th ed. Cincinnati, South-Western Pub. Co., 1969.

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Allied Activities, 1180 Raymond Blvd., Newark, N.J. 07102
American Drycleaner, 21 W. Huron St., Chicago, Ill. 60610
American Fabrics, 24 E. 38th St., New York, N.Y. 10016
American Home Laundry Manufacturers Association Newsletter, 20 N. Wacker Dr., Chicago, Ill. 60604
American Institute of Laundering, Special Reports and and Service Bulletins, Doris and Chicago Aves., Joliet, Ill., 60400
American Laundry Digest, 500 N. Dearborn St., Chicago, Ill. 60610
Bureau of Laundry and Dry Cleaning Standards, Quality Analysis, 914 20th St., N.W., Washington, D.C. 20006
California Cleaner and Launderer, 4603 Palm Dr., La Canada, Calif. 91011
Canadian Cleaner and Launderer, 4920 de Maisonneuve Blvd. W., Suite 405, Montreal, Quebec 6
Coin Launderer and Cleaner, 75 Third St. N.W., Atlanta, Ga. 30300
Coin-Op News, 2264 Penobscot Bldg., Detroit, Mich. 48226
Coinamatic Age, 60 East 42nd St., New York, N.Y. 10017
Coin-Op, 200 Madison Ave., New York, N.Y. 10016
Daily News Record, 7 East 12th St., New York, N.Y. 10013
Diaper Service Industry Association Newsletter, 3900 Chestnut St., Philadelphia, Pa. 19101
Diaper Service Industry Association Research Report, 3900 Chestnut St., Philadelphia, Pa. 19101
Drycleaners News, 90 Church St., Naugatuck, Conn. 06770
Drycleaning World, 200 Madison Ave., New York, N.Y. 10016
Fabric Facts, 909 Burlington Ave., Silver Spring, Md. 20900
Finest in Finishing, Westerly, R.I. 02891
Guide to Textile Maintenance, 777 W. Peachtree St. N.E., Atlanta, Ga. 30308
Home Laundry Conference Proceedings Book, 20 N. Wacker Dr., Chicago, Ill. 60604
Institutional Laundry and Linen, 200 Madison Ave., New York, N.Y. 10016
LCATA Allied Activities, 1180 Raymond Blvd., N.J. 07102
LCATA Convention Calendar, 1180 Raymond Blvd., Newark, N.J. 07102
LSAA (Linen Supply Association of America) Sales Tips, 975 Arthur Godfrey Road, Miami Beach, Fla. 33140
Laundry and Drycleaning International Pictorial Data and Buying Guide Annual, 200 Madison Ave., New York, N.Y. 10016
Laundry Journal, 466 Lexington Ave., New York, N.Y. 10017
Linen Supply Association of America Newsletter, 975 Arthur Godfrey Rd., Miami Beach, Fla. 33140
Linen Supply News, P.O. Box 2427, Miami Beach, Fla. 33140
Magnews, Magnus Chemical Co., South Ave., Garwood, N.J. 07027
Management Guidelines, 7 South Dearborn St., Chicago, Ill. 60603
Maytag Commercial Merchandiser, 403 W. 4th St., N. Newton, Iowa 50208
Modern Textiles, 350 Fifth Ave., New York, N.Y. 10016
Monthly Mailer, So., Chicago & Doris Sts., Joliet, Ill. 60431
NACLEO News (National Assoc. of Coin Laundry Equipment Operators), Maryland Trust Bldg., Baltimore, Md. 21202
NIRC Voice (National Inst. of Rug Clng.) 1815 N. Ft. Myer Dr., Arlington, Va. 22209
NAIL'M News & Bulletin (Natl. Assoc. of Institutional Laundry Managers), P.O. Box 11486, Phildelphia, Pa. 19111
National Association of Coin Laundry Equipment Operators News, Maryland Trust Bldg., Baltimore, Md. 21202
National Automatic Laundry and Cleaning Council News, 7 S. Dearborn St., Chicago, Ill. 60603
National Cleaner Guidebook Issue. 466 Lexington Ave., New York, N.Y. 10017
National Institute of Drycleaning Bulletins, International Fabricare Institute, So. Chicago and Doris Streets, Joliet, Ill. 60431
National Institute of Drycleaning Reporter, International Fabricare Institute, So. Chicago and Doris Streets, Joliet, Ill. 60431
New Era Laundry and Cleaning Lines, 7915 S. Western Ave., Los Angeles, Calif. 90047
Oakite News Service, 50 Valley Road, Berkeley Heights, N.J. 07922

Rental Laundry Management, 200 Madison Ave., New York, N.Y. 10016

Sponge and Chamois Institute Bulletin, 22 Main St., Sayville, N.Y. 11782

Spot News, Dow Chemical Co., Midland, Mich. 48640

TSM (Textile Services Management), 466 Lexington Ave., New York, N.Y. 10017

TSM's Guidebook & Directory, 466 Lexington Ave., New York, N.Y. 10017

Technical Fabric-Fashions, 909 Burlington Ave., Silver Spring, Md. 20906

Texas Laundry & Cleaning Journal, 610 Brazos, Austin, Texas 78767

Textile Maintenance: The Guide To, 777 W. Peachtree, N.E., Atlanta, Ga. 30306

Textile Maintenance Reporter, P.O. Box 3334, Austin, Texas 78704

What's Doing?, 1180 Raymond Blvd., Newark, N.J. 07102

Appendix

REPRESENTATIVE TRADE ASSOCIATIONS

ALABAMA

ALABAMA INSTITUTE OF LAUNDRY AND DRY-CLEANING, No. 10 High Bldg., P.O. Box 2261, Montgomery, Ala. 36101

GREATER BIRMINGHAM CLEANERS ASSN., 2322 No. 12th Ave., Birmingham, Ala. 35234

ARIZONA

ARIZONA DRYCLEANERS AND LNDRS. ASSN., 635 West Indian School Rd., Womac West Bldg., Phoenix, Ariz. 85013

TUCSON DRYCLEANERS ASSN., 435 East 9th St., Tucson, Ariz. 85705

ARKANSAS

ARKANSAS DRY CLEANERS AND LAUNDRY ASSN., Tower Building, North Little Rock, Ark. 72201

CLEANERS INSTITUTE OF GREATER LITTLE ROCK, 1306 "A" Main, Little Rock, Ark. 72202

CALIFORNIA

ASSOCIATED COIN-OP DRYCLEANERS OF NORTHERN CALIFORNIA, 2242 Fourth St., San Rafael, Calif. 94901

ASSOCIATED DRY CLEANERS OF CALIFORNIA, 1525 East 17th, P.O. Box 10218, Santa Ana, Calif. 92711

CALIFORNIA DRYCLEANERS ASSN., 10615 South Highway 85, Cupertino, Calif. 95014

CLEANERS AND DYERS GUILD OF GREATER LOS ANGELES, 400 South Beverly Dr., Beverly Hills, Calif. 90212

EAST BAY COUNTIES DRYCLEANERS ASSN., 566 Dutton Ave., San Leandro, Calif. 94577

HARBOR DRYCLEANERS ASSN., 2292 Long Beach Ave., Long Beach, Calif. 90806

KERN COUNTRY CLEANERS AND DYERS ASSN., 106 Roberts Lane, Bakersfield, Calif. 93308

LOS ANGELES LAUNDRYOWNERS ASSN., 900 Wilshire Blvd., Los Angeles, Calif. 90017

NATIONAL ASSOCIATION OF DRYCLEANERS, 4100 W. Commerce Ave., P.O. Box 2497, Fullerton, Calif. 92633

ORANGE COUNTY DRY CLEANERS ASSN., 1731 So. Euclid, Anaheim, Calif. 92802

PASADENA DRYCLEANERS ASSN., 601 Walnut St., Pasadena, Calif. 91101

SAN BERNARDINO DRYCLEANERS ASSN., 407 So. E. St., San Bernardino, Calif. 92401

SAN FERNANDO VALLEY DRY CLEANERS ASSN., 15036 Ventura Blvd., Sherman Oaks, Calif. 91403

SAN FRANCISCO BAY AREA DRY CLEANERS ASSN., 1301 Hearst Blvd., San Francisco, Calif. 94103

SAN JOAQUIN CLEANERS ASSN., 2315 North California St., Stockton, Calif. 95204

SANTA CLARA DRYCLEANERS ASSN., 1153 Lincoln Ave., San Jose, Calif. 95125

SOUTHSIDE DRYCLEANERS ASSN., 10406 South Figueroa St., Los Angeles, Calif. 90003

STATE BOARD OF DRYCLEANERS, 1020 N St., Sacramento, Calif. 95814

COLORADO

ROCKY MOUNTAIN LAUNDRY AND CLEANERS COUNCIL, 3726 Pierce, Wheatridge, Col. 80033

CONNECTICUT

THE CONNECTICUT LAUNDERERS AND CLEANERS ASSN., INC., 111 Charter Oak Ave., Hartford, Conn. 06106

DISTRICT OF COLUMBIA

TRI-STATE AND LAUNDRY DRY CLEANING ASSN. OF GREATER WASH., 6917 Arlington Rd., Bethesda, Md. 20014

FLORIDA

DADE COUNTY LAUNDRY AND DRYCLEANERS ASSN., INC., 434 Catalonia Ave., Coral Gables, Fla. 33134

CLEANERS AND LAUNDERERS ASSN. OF GREATER ST. PETERSBURG, 4527 28th Ave., N., Petersburg, Fla. 33713

FLORIDA INSTITUTE OF LAUNDERING AND CLEANING, 1723 Fairway Lane, Rockledge, Fla. 32955

LINEN SUPPLY ASSN. OF AMERICA, 975 Arthur Godfrey Rd., P.O. Box 2427, Miami Beach, Fla. 33141

TAMPA LAUNDRY AND DRYCLEANING INSTITUTE INC., 4904 Florida Ave., Tampa, Fla. 33503

GEORGIA

GEORGIA LAUNDERERS AND CLEANERS ASSN., 1145 Peachtree St., N.E., Atlanta, Ga. 30309

GREATER ATLANTA DRYCLEANING AND LDRY. ASSN., 296-14th St., N.W., Atlanta, Ga. 30318

HAWAII

HONOLULU LAUNDRYOWNERS ASSN., 932 Chapin St., Honolulu, Hawaii 96813

IDAHO

IDAHO LAUNDERERS AND CLEANERS ASSN., 3415 Shasta Dr., Boise, Id. 83702

ILLINOIS

CHICAGO DRY CLEANERS ASSN., 203 No. Wabash Ave., Chicago, Ill. 60601

ILLINOIS LAUNDRY ASSN., 188 West Randolph St., Chicago, Ill. 60601

ILLINOIS STATE DRYCLEANERS ASSN., P.O. Box 663, Wheaton, Ill. 60187

INTERNATIONAL FABRICARE INSTITUTE, Joliet, Ill. 60434

NATIONAL AUTOMATIC LAUNDRY AND CLEANING COUNCIL, 7 So. Dearborn St., Chicago, Ill. 60603

PROFESSIONAL DYERS GUILD, 11037 Front St., Mokena, Ill. 60448

PEORIA INSTITUTE OF DRYCLEANERS, 210 N. Main St., Peoria, Ill. 61611

INDIANA

GARY MASTER CLEANERS DYERS ASSN., INC., 808 Gary National Bank Building, Gary, Ind., 46402

INDIANA DRY CLEANING AND LAUNDRY ASSN., INC., 3901 N. Meridian St., Indianapolis, Ind. 46208

IOWA

IOWA DRYCLEANERS ASSN., 1930 Cottage Drove Ave., Des Moines, Iowa 50314

KANSAS

KANSAS ASSN. OF CLEANERS AND LAUNDERERS, INC., Hotel President, Kansas City, Mo. 64105

KENTUCKY

KENTUCKY STATE LAUNDRY AND CLEANING ASSN., Louisville, Ky. 40208

LOUISIANA

LOUISIANA LAUNDRY AND CLEANING ASSN., 221 N. Bernadotte St., New Orleans, La. 70119

MARYLAND

LAUNDRY DRYCLEANING INSTITUTE OF BALTIMORE, 4812 Roland Ave., Baltimore, Md. 21210

SUBURBAN MARYLAND CLEANERS AND LAUNDERERS ASSN., 5909 Blair Rd., N.W., Washington, D.C. 20011

MASSACHUSETTS

CLEANSING PLANT OWNERS OF MASSACHUSETTS, INC., 5 Shawsheen Ave., Bedford, Mass. 01730

NEW ENGLAND LAUNDRY ASSN. AND FABRIC CARE AND NEW ENGLAND LINEN SUPPLY ASSN., 222 Forbes Rd., Braintree, Mass. 02184

MICHIGAN

DRY CLEANING AND LAUNDRY INSTITUTE OF DETROIT, 3977 Second Blvd., Detroit, Mich. 48201

MINNESOTA

LAUNDERERS AND DRYCLEANERS ASSN. OF SAINT PAUL, INC., W.2562 First National Bank Building, Saint Paul, Minn. 55101

MINNESOTA INSTITUTE OF LAUNDERING AND CLEANING, 525 Second Ave., S.W., Hutchinson, Minn. 55350

MISSISSIPPI

MISSISSIPPI LAUNDRY AND CLEANING ASSN., Post Office Box 117, Long Beach, Miss. 39560

SOUTHERN LAUNDRY AND CLEANERS ASSN., Post Office Box 209, Columbus, Miss. 39701

MISSOURI

DRY CLEANING GUILD OF MISSOURI, INC., 6146 Delmar Blvd., St. Louis, Mo. 63112

ASSOCIATED CLEANING AND LAUNDRY SERVICES OF MISSOURI, Hotel President, Kansas City, Mo. 64105

ST. LOUIS DRY CLEANERS EXCHANGE, Ambassador Building, St. Louis, Mo. 63101

MONTANA

MONTANA, SOUTHERN ALBERTA, AND NORTHERN WYOMING DRYCLEANERS ASSN., 202 5th Ave., S., Lewistown, Mont. 59457

NEBRASKA

NEBRASKA STATE DRYCLEANERS ASSN., P.O. Box 80359, Lincoln, Neb. 68501

NEW HAMPSHIRE

NEW HAMPSHIRE LAUNDRY AND CLEANERS ASSN., 96 Belknap St., Laconia, N.H. 03246

NEW JERSEY

LAUNDRY AND CLEANERS ALLIED TRADES ASSN., 543 Valley Rd., Upper Montclair, N.J. 07043

NEW JERSEY LAUNDRY AND CLEANING INSTITUTE, 555 Elizabeth Ave., Newark, N.J. 07112

NEW MEXICO

NEW MEXICO DRYCLEANERS AND LAUNDERERS ASSN., P.O. Box 476, Albuquerque, N.Mex. 87103

NEW YORK

CLEANERS AND DYERS BOARD OF TRADE, INC., 3002-89th St., Jackson Heights, N.Y. 11369

NEIGHBORHOOD CLEANERS ASSN., 116 East 27th St., New York, N.Y. 10016

NEW YORK STATE LAUNDERERS AND CLEANERS ASSN., INC., Box 278, Latham, N.Y. 12110

ROCHESTER DRY CLEANERS, PLANTOWNERS ASSN., 1266 Clifford Ave., Rochester, N.Y. 14621

NORTH CAROLINA

NORTH CAROLINA ASSN. OF LAUNDERERS AND CLEANERS, INC., 15 West Hargett, P.O. Box 1347, Raleigh, N.C. 27602

NORTH DAKOTA

NORTH DAKOTA ASSN. OF DRYCLEANERS AND LAUNDRYMEN, 104 Third Ave., E., Dickinson, N. Dak. 58601

OHIO

LAUNDRYOWNERS ASSN. OF GREATER CINCINNATI, 3820 Broadview, Cincinnati, Ohio 45208

OHIO DRYCLEANERS ASSN., 555 Broad St., E., Columbus, Ohio 43215

OHIO LAUNDRYOWNERS ASSN., 9840 Lorain Ave., Cleveland, Ohio 44102

OKLAHOMA

OKLAHOMA ASSN. OF DRYCLEANERS, INC., 538 So. Victor, Tulsa, Okla. 74104

OKLAHOMA COUNTY CLEANERS ASSN., 607 N. Dewey, Oklahoma City, Okla. 73102

STATE DRY CLEANERS BOARD, Box 53181, Capitol Station, Oklahoma City, Okla. 73105

OREGON

OREGON DRYCLEANERS ASSN., 643 E. 13th St., Eugene, Ore. 97401

OREGON STATE LAUNDRYOWNERS ASSN., 220 S.W. Morrison St., Portland, Ore. 97204

PENNSYLVANIA

PENNSYLVANIA ASSN. OF PROFESSIONAL DRYCLEANERS, 717 East Chelten Ave., Philadelphia, Pa. 19144

PENNSYLVANIA LAUNDRYOWNERS ASSN., 2017 Walnut St., Philadelphia, Pa. 19103

RHODE ISLAND

LAUNDERERS AND CLEANSERS COUNCIL OF RHODE ISLAND, Box C, Providence, R.I. 02901

SOUTH CAROLINA

SO. CAROLINA ASSN. OF LAUNDERERS AND CLEANERS, INC., 2547 Forest Dr., P.O. Box 4344, Columbia, S.C.

SOUTH DAKOTA

SO. DAKOTA DRY CLEANING ASSN., 259 Wise, S.W., Huron, S. Dak. 57350

TENNESSEE

MEMPHIS LAUNDRY CLUB, 882 Crosstown Station, Memphis, Tenn. 38104

MID SOUTH CLEANERS AND LAUNDRY ASSN., P.O. Box 4882, Crosstown Station, Memphis, Tenn. 38104

TEXAS

CENTEX TEXTILE MAINTENANCE ASSN., 1806 Treadwell, Austin, Tex. 78704

GREATER HOUSTON CLEANERS AND LAUNDERERS ASSN., 712 Scanlan Building, Houston, Tex. 77002

QUALIFIED DRYCLEANERS ASSN., P.O. Box 274, San Antonio, Tex. 78206

TEXAS LAUNDRY AND DRYCLEANING ASSN., 610 Brazos, P.O. Box 1992, Austin, Tex. 78767

UTAH

UTAH STATE CLEANERS AND LAUNDERS ASSN., 411 East 5th, S., Salt Lake City, Utah 84111

VIRGINIA

NORTHERN VIRGINIA DRYCLEANERS ASSN., 2765 So. Quincy, Arlington, Va. 22206

VIRGINIA ASSN. OF LAUNDERERS AND CLEANERS, 2414 Lockwood Rd., Richmond, Va. 23229

WASHINGTON

ASSN. OF INDEPENDENT DRYCLEANERS, 7720 39th Ave., N.E., Seattle, Wash. 98115

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WEST VIRGINIA

W. VA. LAUNDERERS AND CLEANERS ASSN., 1335 Washington St., E., Charleston, W. Va. 25301

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LAUNDRY AND DRYCLEANING INSTITUTE OF WISCONSIN, INC., 229 East Wisconsin Ave., Milwaukee, Wis. 53202